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# NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

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# ADVISORY BOARD ON RADIATION AND WORKER HEALTH

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60<sup>th</sup> MEETING

+ + + + +

TUESDAY, DECEMBER 16, 2008

The meeting came to order at 9:00 a.m. in the Oglethorpe Room of the Augusta Marriot Hotel and Suites, 2 Tenth Street, Augusta, Georgia, Dr. Paul L. Ziemer, Chair, presiding.

PRESENT:

PAUL L. ZIEMER, Chair JOSIE M. BEACH, Member BRADLEY P. CLAWSON, Member MICHAEL H. GIBSON, Member MARK A. GRIFFON, Member JAMES M. MELIUS, Member WANDA I. MUNN, Member ROBERT W. PRESLEY, Member JOHN W. POSTON, Member GENEVIEVE S. ROESSLER, Member (via telephone)

TED KATZ, Acting Designated Federal Official

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9:10 a.m.

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CHAIR ZIEMER: Good morning, 3 I'd like to officially call the 4 everyone. meeting to order. This is the Advisory Board 5 6 on Radiation and Worker Health as you know and 7 we're pleased to be meeting here in beautiful It's a pleasant time of year to be Augusta. 8 here, at least for some of us who've come from 9 10 the more northern parts of the country. But in any event, welcome to all. I have a couple 11 of housekeeping reminders for you. There is a 12 13 registration booklet out in the foyer and we'd like everyone to register, board 14 members, members of the federal agencies, members of 15 16 the public, register your attendance so that we have a record of that. Also, there is a 17 sign-up booklet out there that is available 18 19 for those who would like to participate in the public comment period today. The 20 public comment period is scheduled for 5:00 p.m. and 21 if you wish to make public comment you can 22

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register in that booklet again in the foyer. Also, on the table in the back there are a variety of documents, including today's agenda, so please avail yourself of those as needed.

In general, we will follow the 6 7 agenda as given. The times on the agenda are in general approximate times. They are not 8 time certain, so we may get ahead or behind 9 depending on the issue and the nature of the 10 11 discussion. But in event, unless any otherwise announced we will follow the order 12 13 of the agenda as designated in that document.

I will take a moment to welcome one 14 15 individual who is with us and that is Dr. 16 Lewis Wade who was our Designated Federal Official. Lew, we're glad to have you here. 17 He missed us so much, the deliberations, he 18 19 couldn't stay away, but Lew, welcome. For the record, the record will show that Board Member 20 Phil Schofield is not here this morning. Phil 21 had some difficulty in traveling and 22 will

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1 arrive tomorrow. Board Member Dr. James 2 Lockey will not be able to be with us today. And Board Member Dr. Gen Roessler will be with 3 by phone, and I think we do need to 4 us determine whether Dr. Roessler's on the line. 5 Gen, are you with us this morning? 6 7 MEMBER ROESSLER: I am on the line. CHAIR ZIEMER: Great, that sounds 8 like we have a good connection. 9 10 MEMBER ROESSLER: I can hear well, thank you. 11 CHAIR ZIEMER: Thank you. So other 12 13 than that, the rest of the Board members are here assembled. Designated 14 Our Federal Official is Ted Katz. Ted, if you have some 15 additional remarks please proceed. 16 Yes, thank you. 17 MR. KATZ: I am the acting Designated Federal Official and I 18 19 want to welcome you, everyone here in the room, and from Savannah River site, and also 20 everyone who's attending by telephone. 21 And I also want to extend the welcome of Dr. 22 **NEAL R. GROSS** 

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Christine Branch who is the acting director of NIOSH, but ordinarily serves as the Designated Federal Official currently for this board, and Secretary Levitt of the Department of Health and Human Services who is advised by this board. So welcome everybody.

And then just a functional matter 7 for the people attending by telephone. Please 8 realize - you don't, but your phones 9 are 10 hooked into our sound system here so if there if is talk on your phones, there's 11 any all hear 12 background noise it. we Dogs 13 barking, dishes being washed, wherever you might be in your office, phones ringing, all 14 15 of that is amplified here and it'll disrupt 16 the Board while we hear that noise, so please mute your phones and keep them muted except 17 when you're addressing the Board, and if you 18 19 don't have a mute button \*6 will work on your phone to mute the phone. And the other thing 20 I just ask is if you want to disconnect please 21 don't hit Hold, but disconnect completely and 22

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call back in because if you press Hold, you don't realize that but there is - we'll either get a beep, or we'll get Muzak or something and that'll disrupt the Board as well. So please disconnect and call back in if you need to. Much thanks.

CHAIR ZIEMER: Okay, thank you very 7 We will proceed then, and for the much. 8 benefit of those of you who may be visitors 9 10 for the first time to this board, we typically have an update from the federal agencies that 11 involved in 12 this program, are more 13 specifically from NIOSH and Department of Labor. And so we're going to begin our agenda 14 15 with those two reports this morning. We'll 16 begin first with the program update from NIOSH and this will be given by the Director of 17 OCAS, Office of Compensation Analysis, Larry 18 19 Elliott.

20 MR. ELLIOTT: Good morning. Thank 21 you Dr. Ziemer, and I too add my appreciation 22 for the Board meeting here in lovely Augusta.

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It's much warmer here than it is back in Cincinnati where we're experiencing snowstorms today. So thanks for meeting here.

4 I've got a couple or three news briefs that I'd like to share with the Board 5 before I get into the regular set of slides 6 7 that I use. First of all, just to let the Board know and members of the audience, we 8 into another review 9 have entered by the Government Accountability Office. 10 This review on the program concerns the implementation of 11 The review includes not only NIOSH, 12 this law. 13 but also the activities of the Department of Labor and the Department of Energy in the 14 15 Can't hear? Is that better? program. Okay, 16 now we're up and running. As I was saying, we have entered into a review with the Government 17 looking Accountability Office at the 18 19 implementation of this program. It addresses the activities of the Department of Labor as 20 well as NIOSH and the Department of Energy. 21 That review has just started and we're not -22

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we don't know at this point in time when it will be completed or how soon they will deliver their report. They have just started their fact-finding phase, and so that's off and running.

6 The second news brief I have to make sure the Board is aware of is that the 7 Labor's Inspector 8 Department of General, Office of Inspector General filed a report -9 10 and you can find this on the DOL website; you can use OCAS's website and go to Related Links 11 and that will take you to the Department of 12 13 Labor website. You can find this report Accompanying the 14 there. report is а 15 memorandum of response from the Assistant 16 Secretary of Department of Labor providing remarks about the report, and I'll have a few 17 slides to address some issues that we have 18 19 with the report later on in my presentation. There's also been some - I'd like 20

21 to take the opportunity at this point to also 22 mention that in the media there's been some

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1 recent information that has been provided that 2 given misunderstanding perhaps has or misconception to things that are going 3 on 4 around the Dr. Ruttenberg data for the Rocky NIOSH has been working hard with 5 Flats site. Dr. Ruttenberg's wife, Margaret Ruttenberg, to 6 7 get a copy of this data set. We've been doing since April 2006 that of when а NIOSH 8 scientist met with Dr. Ruttenberg before his 9 10 death to discuss Dr. Ruttenberg's study. And based on that meeting we concluded, with the 11 information Dr. Ruttenberg had given us that 12 13 the dosimetry data that used was in Dr. Ruttenberg's study is the same 14 set of data that NIOSH used in efforts 15 has our to reconstruct dose in the neutron dose 16 reconstruction project, which is 17 the data that's used by NIOSH as well as the data used 18 19 by Dr. Ruttenberg. Our efforts to work with 20 Ms. Ruttenberg to get a copy of the data has been to verify that we have the same set of 21 data and that the data is being used to the 22

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1 fullest extent and vantage of the claimants. 2 there's few pieces However, а key of information, misinformation, that I'd like to 3 4 clarify. NIOSH has not had the opportunity to examine data 5 fully the set that the Ruttenbergs hold. We've discussed its source 6 7 and its structure and we've seen samples of the data, but we've not had the opportunity to 8 review the dosimetry data and to confirm our 9 10 belief that it is the same set of neutron dose reconstruction project data that we're both 11 Two, both Dr. Ruttenberg 12 using. and Ms. 13 Ruttenberg have confirmed that the source of the study's data the dose 14 was neutron 15 reconstruction project data, data which is 16 also used in our efforts to reconstruct the think it's 17 doses. Three, we an oversimplification to say that if Rocky Flats 18 19 worker had proof that they were monitored for neutron exposure that they would qualify for 20 compensation. Many people 21 had neutron exposure outside of the class, period. 22 And so

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1 that could be part of what is being contested Four, 2 here. we cannot comment on any particular claimant's data and so we encourage 3 claimants to contact NIOSH if they think that 4 we have missed the mark on doing their dose 5 reconstruction, or if they think that they've 6 7 had neutron exposure in their work history that the Department of Labor may not be able 8 to identify. We are continuing to pursue the 9 10 Ruttenberg data and I'm hopeful that later this week if not early next week we will be 11 able to reach agreement with Ms. Ruttenberg 12 for the transfer of the full data set to NIOSH 13 for use in the program. 14

Lastly as a news brief, I sent an 15 email to you all yesterday, all the Board 16 members, with a Federal Register notice about 17 the opportunity to comment on the computer-18 19 assisted telephone interview questionnaires This is a requirement by the 20 that are used. Office of Management and Budget that we get a 21 renewal of this survey instrument every so 22

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This'll be the second time we've asked 1 often. 2 for that renewal. There's been some concern among board members that you will not have the 3 4 opportunity to comment on this set of questions or the questionnaires that are used, 5 and I just want to confirm for you that you 6 7 have plenty of opportunity, both as individual You can make comments through the citizens. 8 public comment period and get your comments in 9 10 within 60 days. Go into the docket and we will take those into consideration 11 as we revise and finalize these survey instruments. 12 13 I've also spoken with the working group on procedures and informed them that if, as they 14 come forward to the Board with recommendations 15 or comments about these questionnaires that -16 and if the Board does not have enough time to 17 meet the 60-day public comment period we will 18 19 still accept the Board's consensus comments and they will be considered in the revision of 20 these questionnaires. So just wanted to make 21 that everyone on the Board understood 22 sure

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what was happening with these CATI questionnaire documents. And with that I'll stop with the news briefs and get into the slides that you typically see every time I make this presentation.

As of November 30, 2008, the 6 7 Department of Labor has referred 28,405 cases to NIOSH for dose reconstruction. 8 We have completed 79 percent of those, or 22,396 cases 9 10 have been returned to DOL. And if we break that number down into finer segments, 19,333 11 were returned to Department of Labor with a 12 13 dose reconstruction report, 793 were pulled from NIOSH's claim population 14 by the Department of Labor for various reasons, but 15 16 essentially a claim was not longer any eligible so they were removed from our claim 17 There have been 2,270 claims population. 18 19 pulled from our claim population so that the Department of Labor can determine the 20 SEC class eligibility for those. That leaves 20 21 22 percent of the 28,405 claims, or 5,562 claims

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1 or cases still at NIOSH for dose 2 reconstruction. We've had 447 claims, or 1 percent, that are in a state of administrative 3 closure on dose reconstruction. And I remind 4 the Board and the audience that this means 5 that we have completed our work and we're 6 7 awaiting, by preparing a dose reconstruction report and providing that to the claimant, and 8 we're waiting for the claimant to sign the 9 10 OCAS 1 form and return the claim, the dose reconstruction to us with the OCAS 1 so that 11 transmit that all 12 then to the we can 13 Department of Labor for decision. Claimants given days OCAS 14 are 60 to sign the 1 15 indicating that they further have no 16 information to provide and they are given another 14 days grace at any point thereafter. 17 If they choose to submit the OCAS 1 or submit 18 19 additional information we would reopen that dose reconstruction for the claim. 20 This is your pie chart which shows 21

22 you the current case status in the NIOSH case

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1 population. I won't go through all of this, 2 but I would highlight your attention to those portions of the pie chart that we are still 3 Those would be the yellow, the 4 working on. active claims, 4,399, and the pended claims, 5 6 1,163. And I'll speak a little more about 7 those in a moment. Of the 1,163 pended claims that NIOSH holds, we provided here for you the 8 top six categories which represent 91 percent 9 And these categories for 10 of those claims. pending include technical basis documentation, 11 changes that are occurring so the claim is 12 13 awaiting those changes. Four hundred and seventy-nine claims await those kinds of 14 15 Three hundred and twenty-seven changes. 16 claims pended because of special are а exposure cohort issue, either there's - it's a 17 claim that doesn't fit into the class and 18 19 we're developing the partial dose reconstruction approach that will be used for 20 or the claim has been pended that claim, 21 awaiting the designation of an SEC class. 22 In

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other words, we know that the class is going 1 2 to go forward and we're not performing any work until that class is established so the 3 claim can move under that mechanism. 4 There claims are pended because of 5 are 82 that 6 incorrect employment information and so we're 7 awaiting the Department of Labor. Time is ticking on them in that regard for us to hear 8 from them 9 about the correct employment 10 information. Seventy-four claims have an incorrect cancer ICD-9 code, and again we're 11 waiting for Department of Labor to 12 correct 13 that situation to allow us to move forward with the dose reconstruction. Fifty-four 14 15 claims are pended because they're awaiting 16 additional information from the Department of Energy or atomic weapons employer facility, 17 and we can't complete a dose reconstruction 18 19 until we have that information. There are 41 claims that have a situation where a missing 20 survivor or claimant is the cause for the 21 pending status. Again, these six categories 22

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comprise 91 percent of the pended claims.
 Whoa.

MEMBER CLAWSON: Way to go.

4 MR. ELLIOTT: Well, I hope you liked that. Sorry for that. Of the 19,333 5 dose reconstructions that were returned to the 6 7 Department of Labor, we show in this slide that 33 percent of those had a Probability of 8 Causation greater than 50 percent, leaving 67 9 10 percent with a PoC of less than 50 percent. If we look at the distributions of probability 11 for causation of all claims dose reconstructed 12 13 and returned to Department of Labor, you'll see here in this slide the breakout of those 14 15 distributions in 10 percent tile increments, 16 up to the 50 percent and greater.

To look at our active caseload, of the 5,562 cases that are remaining at NIOSH for dose reconstruction, we have 2,417 that are in the process dose reconstruction. A dose reconstructor has an assignment, they're working on a piece of that claim or they're in

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1 a review stage. So there are 682 initial 2 draft dose reconstruction reports in the hands of the claimants, where we're awaiting the 3 OCAS 1 form to be returned, and 2,463 cases 4 assigned to 5 have not been а health yet 6 physicist for dose reconstruction. It's 7 important to note, and we monitor this closely, that 61 percent of these, or 3,406 8 claims are older than one year. We have these 9 10 since September's meeting we've seen а dramatic decrease in this number of old cases, 11 older than a year. We've been working hard on 12 13 those, and just to remind you at your September board meeting that number was 3,849 14 15 and so we've removed and acted upon 433 of 16 those old claims.

Τf look at the first 5,000 17 we claims that were sent to us which represent 18 19 our oldest portion of the caseload, there have been 3,722 returned to Department of Labor 20 with a dose reconstruction. Eighty-five of 21 the first 5,000 currently in 22 are an

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administratively closed situation, 1 254 2 represent cases that had been pulled from our caseload by the Department of Labor, 331 cases 3 4 representative of eligibility for are а special exposure cohort class, four cases have 5 a situation where the dose reconstruction is 6 7 with the claimant and we're awaiting the OCAS That leaves - the big thing here is 579 1. 8 cases which we've completed once and they've 9 10 been returned to us for some rework issues and there are 25 cases that have not yet had one 11 initial 12 dose reconstruction, or dose 13 reconstruction out of the first 5,000 claims. We're working hard on those 25 and you can 14 15 see that those 25 represent 20 distinct sites. 16 Seventeen of these 25 are in a pending status for these reasons. There's either a claimant 17 survivor information is missing. The 18 19 employment is questionable for two cases. are pended for various 20 There are 13 that reasons as you see here in this slide, either 21 awaiting a dose reconstruction methodology or 22

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1 they're SEC class cases pended before the 2 designation of the class, there's or modifications to the TBD that - technical 3 basis document - that needs to be done. 4 And is a petitioner that 5 it is in one case 6 awaiting the outcome of their petition. Eight 7 of the 25 are in an active status, and these are broken down here. Two employees which do 8 not meet the 250-day criteria for a special 9 10 exposure cohort class, NUMEC and Y-12, and so we are working on partial dose reconstructions 11 for those claims. claims 12 Four NUMEC are 13 pended for non-SEC cancers and we are awaiting a non-SEC dose reconstruction methodology, and 14 15 two claims have been accepted for special exposure cohort at NUMEC for SEC cancers, but 16 reconstruction is needed for those 17 a dose medical benefits claims for for non-SEC 18 19 So you can see that as we work hard cancers. to try to work off the oldest claims, 20 they still can come back to us for various reasons, 21 some due to changes that we have made and some 22

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due to changes within the claim, and in some instances like that last example where dose reconstruction is needed for other purposes within the claim adjudication process.

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graphic here 5 The shows you the trend of receipt of cases from the Department 6 7 of Labor shown in the blue line. The dose reconstruction reports as draft reports to the 8 claimants is shown in the green, lime green or 9 10 yellow line. And then the final reports that are provided to the Department of Labor is 11 the red line. Since the third 12 shown in 13 quarter of 2008 we've been working again above the receipt of DOL so we're working off the 14 15 backlog. Before that you see that little area 16 there. That's where we were receiving more than we were working off so we were building a 17 So this is the chart that we monitor backloq. 18 19 weekly to determine where we're at in our production effort. If we break down -20 I'm sorry this doesn't come out very well in the 21 purple at the top, but looking at our full 22

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1 caseload and we break these down, these 1,000 2 increments of cases received, we show in this blue that these are the completed, the red is 3 the case that has been pulled from us 4 for Department of Labor purposes. The active case 5 is this mustard color here. The SEC cases are 6 7 in green. You can see how those are distributed across claim populations. 8 Cases that have been administratively closed are up 9 10 here in yellow and then this case pending in the purple status at the very top. 11 A new chart that we've added to 12

13 this presentation which also is of interest to the government accountability review that is 14 15 underway is how much time is it taking us to 16 process dose reconstructions. And this chart, and there are several other ways of reporting 17 out on this, but this is one example. 18 In the 19 early days we certainly acknowledged the fact that we didn't have all of our tools and 20 infrastructure together and it was 21 taking quite a long time, years in fact to do a dose 22

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1 reconstruction. And you can see how over time 2 this has improved with more recent cases getting guicker treatment. In fact, that -3 now we are dealing with a case where we have 4 all of our dose reconstruction tools at our -5 6 available to us and at our disposal we're 7 turning dose reconstruction claims around in 30 days or less in some instances. 8 Depends upon the claim. Some claims are, as you know, 9 10 very complex because of the amount of work history the claimant may have had, the number 11 of jobs, the number of sites they worked at 12 13 and a variety of circumstances that they may have encountered which require us to do as 14 15 good a job as we can. So at any rate we're 16 trying very hard to improve our timeliness and this is one example of how we have done in 17 that regard. 18 19 If we look at the number of claims that have been returned to us for rework. 20 Α is a situation where something has 21 rework

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history, the cancer information, the number of 1 2 may have changed, Department survivors of Labor will return the claim to us for 3 а 4 rework. Also, if we make a change in our basis approach technical 5 to reconstructing dose we claim that as a rework. And as you 6 7 know, we provide in those instances a program evaluation review which identifies 8 the affected claims. And here you see in this 9 10 chart in red the 8,503 cases have been returned to us over the course of time since 11 fourth quarter of 2003 till the present, and 12 13 we have returned 5,433 of those. The spikes that you see here late in 2007 and up until 14 15 the second quarter of 2008 represent Super S and a couple of other large program evaluation 16 still reviews issued 17 that were and are underway. 18 19 know, the As you we turn to

20 Department of Energy for requests for dose 21 information in order to complete our dose 22 reconstruction effort, and I report out to you

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1 every meeting on the DOE response to those 2 Right now we have 255 outstanding requests. We follow up on those every 30 3 requests. 4 days. We monitor their progress. We track how long they take and we work with Department 5 6 of Energy to make sure that if the information 7 can be found we will get it. If not, then we claim into take steps to move the dose 8 reconstruction without the information. 9 At 10 this point in time there are 158 requests that are outstanding longer than 60 days. 11 Some, there are five that are longer than 120 days. 12 13 Those the 0ak Ridge facility's are at operations office and we are working with DOE 14 15 on what to do with those five. The rest are 16 less than 120 days but more than 60 days.

In the past few presentations I've 17 made to you we have talked about the technical 18 19 basis documents that are used for atomic weapons employers, especially those sites that 20 work with uranium and thorium metals. 21 And we Technical Basis Document reference that as 22

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6000. And there are a number of appendices that had to be created for special exposure circumstances at atomic weapons employer facilities. We've now completed all 16 of those appendices for those special exposures and you won't see this slide in the future in this presentation.

Where we looked at atomic weapon 8 employer sites that refine uranium and thorium 9 10 metal, we call that Technical Basis 6001, and five appendices that had to be there are 11 special exposure 12 created for circumstances 13 relative to those atomic weapon employer And those five have all now been sites. 14 15 completed and are in use. This slide will not 16 presented in future program staff be 17 presentations.

I mentioned the program evaluation 18 19 Thirty-two program evaluation reports. have been issued date. This 20 reports to represents 8,596 individual claims which have 21 been reviewed against those program evaluation 22

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reports to determine the need for a rework. 1 2 Of those, 3,684 individual claims will be or have been reworked due to the PER changes, 3 1,810 have already been reworked to date and 4 262 claims have had a Probability of Causation 5 increase greater than 50 percent. So we're 6 7 very happy to report that for those claimants. If you're interested in the bulk of that, 262 8 claims that changed in compensation decision, 9 10 124 were from PER 9 which is the lymphoma program evaluation review. The next highest 11 is the Super S program evaluation review at 12 13 123 claims, and then it drops considerably down to the next highest which is 30 for PER 14 20 on blocks chemical. 15

16 In the government we're required to establish what are called PART goals, Program 17 Assessment Rating Tool goals, and in this 18 19 fiscal year we - in last fiscal year, Fiscal Year 08 our goal as you see it was established 20 complete 80 percent of the 21 to new dose reconstructions within six months of receipt 22

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from Department of Labor. This Fiscal Year 08 1 2 set our baseline for performance was to against this goal. And as you see here, we 3 did not do very well. We only achieved 31 4 percent of our goal in that regard. The other 5 6 goal that we have set in FY 08 was to complete 7 50 percent of the legacy dose reconstructions. Legacy is defined as any claim in our hands 8 that is over two years old. And so this looks 9 10 at the oldest claims that we have and in Fiscal Year 08 we completed 54 percent of 11 those claims. So those were our baselines in 12 08 and now we are in Fiscal Year 09 and 13 working to again try to complete 80 percent of 14 15 the new dose reconstructions within six months 16 from receipt of the Department of Labor. As it says here, in 08 our performance was 17 31 percent. How did we get that? Well, there 18 19 2,322 initial dose reconstructions were referred to NIOSH in that Fiscal Year 08. 20 We returned 31 percent of those, 713 21 or to Department of Labor within six months' time. 22

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Of those 713, 560, or 79 percent, were final 1 2 dose reconstructions sent to DOL and 153 or 21 percent are cases that were returned to DOL 3 4 because they fit into a new class. So we didn't have to do a dose reconstruction for 5 6 those claims. We take credit for moving those Our legacy goal is to complete 50 percent 7 on. of the claims that have been in NIOSH for two 8 longer, 9 years or and as you our saw 10 performance in 08, our baseline performance is 54 percent. We arrived at that by completing 11 One thousand five hundred 822 cases in FY 08. 12 13 and thirty-six were initial legacy cases at the beginning of FY 08, 714 of those legacy 14 15 cases at the end of FY 08. We will report out 16 on our progress against these goals at your next meeting and we'll see where we stand at 17 that point against the goals. Thirty-five 18 19 classes have been added to the special since May 2005 and 57 20 exposure cohort of percent or 20 of those classes were processed 21 through the 83.13 process 15, 43 22 and or

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percent were accomplished and designated through the 83.14 process. These classes represent workers from 29 sites and they also represent 2,270 potential claims.

mentioned earlier in the news 5 Т briefs to you that the Department of Labor's 6 7 Office of Inspector General issued a report on November 12 that also included a response as 8 from the 9 an attached memo Department of 10 Labor's Assistant Secretary for Employment Standards, and that was sent in on October 30 11 or dated October 30, 2008, and it was based 12 13 upon the draft report. The Office of the did General visit 14 Inspector NIOSH in 15 Cincinnati and interviewed me, and we were 16 told that we would be given an opportunity to comment on the draft report for clarity and 17 We have accuracy, but that never happened. 18 19 several concerns about the report, and I'll mention a couple of them in the 20 next few slides. One of the recommendations that the 21 OIG made was to consolidate all communication 22

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1	with claimants at Department of Labor and the
2	response memo from the Assistant Secretary
3	disagreed with this recommendation as do we at
4	NIOSH. We think that we have a robust
5	communication process in dealing with
6	claimants and petitioners and we think it's
7	most appropriate that NIOSH have those
8	communications with the claimants and the
9	petitioners. So we don't see the benefit of
10	combining the communication effort and placing
11	it at the Department of Labor.
12	Also, there was a concern raised
12 13	Also, there was a concern raised about the impact of NIOSH's guidance changes.
13	about the impact of NIOSH's guidance changes.
13 14	about the impact of NIOSH's guidance changes. These guidance changes refers to our program
13 14 15	about the impact of NIOSH's guidance changes. These guidance changes refers to our program evaluation reports which reflect our
13 14 15 16	about the impact of NIOSH's guidance changes. These guidance changes refers to our program evaluation reports which reflect our commitment to use the best available science
13 14 15 16 17	about the impact of NIOSH's guidance changes. These guidance changes refers to our program evaluation reports which reflect our commitment to use the best available science in dose reconstruction. The number 12,955 is
13 14 15 16 17 18	about the impact of NIOSH's guidance changes. These guidance changes refers to our program evaluation reports which reflect our commitment to use the best available science in dose reconstruction. The number 12,955 is a mystery to us. As you've already seen in
13 14 15 16 17 18 19	about the impact of NIOSH's guidance changes. These guidance changes refers to our program evaluation reports which reflect our commitment to use the best available science in dose reconstruction. The number 12,955 is a mystery to us. As you've already seen in some of my earlier slides the total number of

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employment change or cancer information, and out of that 8,503 as of right now only 3,684 claims have been determined to need rework due to the program evaluation reviews that they have issued. So we don't know where this 12,955 number comes from.

There is also mentioned in this 7 Office of Inspector General report that cases 8 which require NIOSH processing took an average 9 10 of 1,200 days for DOL to adjudicate, including days of 870 for NIOSH dose 11 an average reconstructions. While it is true that dose 12 13 reconstruction is a lengthy process and is time-consuming in 14 and many cases is very 15 complex, in the early years of the program as 16 I mentioned we didn't have the infrastructure This slide shows you that in 2008 17 available. our average time was 775 days, and it's 18 19 improved over the next two years, 586 days in FY 2007 and 373 days in FY 2008. 20 So we're a little baffled by the 870 days at NIOSH. 21

I'll move on now to present some

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1 site-specific statistics relative to the 2 Savannah River site for those in the audience who are interested as well as board members 3 4 who are interested. To date, as of November 30 there have been 3,318 Savannah River site 5 cases referred to NIOSH and we have completed 6 7 80 percent of those as a dose reconstruction effort, or 2,647. If we look at the decisions 8 on those claims, Department of Labor has found 9 10 972 or 37 percent had a PoC of greater than 50 percent, and 1,675 or 63 percent had a PoC of 11 less than 50 percent Probability of Causation. 12 13 Sixty-seven, or 2 percent have been pulled by the Department of Labor for various reasons, 14 but essentially they are ineligible for dose 15 reconstruction so they've been removed from 16 our case file. Six hundred and four or 18 17 percent are active Savannah River site claims 18 19 at NIOSH and we're working those.

If we look at the Probability of Causation distribution for only Savannah River site claims it mirrors somewhat what you saw

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1 in the earlier slide for the overall program. 2 There are 964 as I mentioned that are greater than 50 percent, and the remainder are broken 3 out as you see in those other bars on the 4 If we want to look at how long it's 5 chart. taking to do dose reconstructions for Savannah 6 River site claimants, overall it's been 557 7 days on average for a Savannah River site 8 through dose reconstruction. 9 claim to get 10 However, if we look at the year 2006, 216 days were required on average to complete a dose 11 In 2007 that jumped up to 306 12 reconstruction. 13 days, and in 2008 currently we are averaging 122 days to process a dose reconstruction for 14 Savannah River site claims. And that is to -15 16 this slide is to submit to Department of Labor a dose reconstruction report that the claimant 17 has provided us an OCAS 1 on. This slide 18 19 shows you just the days it's taken for NIOSH to do its work and turn a dose reconstruction 20 over to the claimant. So the other slide is 21 to DOL, this slide is just to the claimant and 22

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1	you can see that the days here in 2006 are
2	173, 2007 are 273 on average, and 2008 the
3	average is 107 days. Remind everybody that
4	there is again a 60-day period for a person to
5	sign the OCAS 1, and I think the difference
6	between these two slides that you're seeing is
7	the time difference it takes folks to process
8	what they have in the dose reconstruction
9	report and provide the OCAS 1. And with that
10	I'll be happy to take any questions that might
11	be out there.
12	CHAIR ZIEMER: All right, thank you
13	Larry. I wonder if you might comment a little
14	more on the Program Assessment Rating Tool.
15	You indicated that your objective for Fiscal
16	Year 08 was 80 percent of the new dose
17	reconstructions within six months of receipt,
18	and your performance was I think 31 percent.
19	MR. ELLIOTT: That's correct.
20	CHAIR ZIEMER: And you indicated
21	your new goal for this new fiscal year again
22	is 80 percent. I guess my question is was the
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1 80 percent goal - you must consider it still to be realistic, so - you're going back for 2 the same goal. This is the baseline, 3 SO you're sort of getting a feel -4 We're tied to the 5 MR. ELLIOTT: same goal because we had to establish 6 а 7 baseline for PART. And so the goal has to remain the same and you work against not only 8 the goal, but you work against your baseline. 9 10 And yes, we felt that 80 percent was achievable and realistic if we were in a 11 situation where we, like in 2005 and 2006 12 13 where we had full production capacity from our technical support contractor. We haven't had 14 15 that - we have not had that -16 CHAIR ZIEMER: That was my How much did that impact - you were 17 question. almost on a month to month basis on technical 18 19 support, is that? MR. ELLIOTT: Yes, that is correct. 20 here, we believe, is the 21 What you see artifact of that. That low production rate, 22

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1 that 31 percent is an artifact of not being 2 able to see our contractor operate at the fullest capacity. We've not had a regular 3 appropriations cycle since 2006 so we've been 4 operating under continuing resolutions which 5 are problematic, but more problematic is the 6 7 lack of a new technical support contract award into using contract which has pushed us 8 extensions and we are only able to extend the 9 10 contract for short periods of time, four to six weeks, eight weeks, and this last contract 11 extension which carries us through the end of 12 13 this month I think was the longest in a series of 12 now contract extensions that we've had. 14 15 So we believe, we feel that we have the experience documented that we could achieve 80 16 percent if our contract support is up to par. 17 CHAIR ZIEMER: Dr. Melius? 18 19 MEMBER MELIUS: I have a question, but first a comment. I would note that if you 20 - the other way of getting that number up, 21 that percentage up is to do more SECs. 22 **NEAL R. GROSS** 

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1	MR. ELLIOTT: That's true.
Ť	MR. ELLIOII: Illac S ciue.
2	MEMBER MELIUS: Because it seemed
3	to combine the two and it's - I know you have
4	to come up with a single statistic and it's
5	hard, but it seems like a funny way of mixing
6	things also. My question goes back to the
7	comments of the Board, or potential comments
8	of the Board about the changes in the
9	interview, and just actually a technical
10	question, but if we - if the Board were to
11	submit its comments after February 9, would
12	they become part of the docket?
13	MR. ELLIOTT: I believe I can add
14	them to the docket post the closing period of
15	the docket, but at any rate, we will still
16	consider them and you know, address them.
17	MEMBER MELIUS: Would it be
18	possible for the attorneys to give us an
19	answer to that question? It would be helpful
20	to know. I mean, not right now, but if they
21	could check because I think it makes some
22	difference at least in terms of my thinking.
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1	CHAIR ZIEMER: Thank you.
2	MEMBER MELIUS: One other comment.
3	Your one - I don't know how you can do this
4	better, but your claims processing trends
5	slide which is - you don't number the slides,
6	so it's Number 13 of the group. I just -
7	MR. ELLIOTT: Yes, the new slide I
8	introduced here?
9	MEMBER MELIUS: Yes.
10	MR. ELLIOTT: Average time?
11	MEMBER MELIUS: Right. If I
12	understand it correctly, that's for newly
13	received - from the time that you receive
14	them. So the numbering, like 24,000 would
15	represent those that were received, you know,
16	during some recent time period. But more
17	importantly, those, the 28,000 would be the
18	most recently received. So obviously if you
19	were able to complete them the short - you
20	know, the turnaround would be very short. And
21	so it doesn't really reflect all of the -
22	MR. ELLIOTT: It's not an overall
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1 average.

-	average.
2	MEMBER MELIUS: Right.
3	MR. ELLIOTT: This slide - let me
4	see if I can go back to that.
5	MEMBER MELIUS: I think going back
6	in time, I would say it's towards the 20,000 -
7	it probably is a reflection of significant
8	improvement, but it's a little bit misleading
9	at the end.
10	MR. ELLIOTT: Well, if you look at
11	the X axis you're talking about those tracking
12	numbers in that 1,000 or 2,000 or 3,000, 4,000
13	category.
14	MEMBER MELIUS: Right.
15	MR. ELLIOTT: So it's the average
16	time within that category of claims.
17	MEMBER MELIUS: Yes.
18	MR. ELLIOTT: So then yes. But the
19	early claims, the oldest claims took us the
20	longest time.
21	MEMBER MELIUS: Right, right.
22	MR. ELLIOTT: If you're a claimant
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who has a claim - NIOSH tracking number of 1 28,000 you can see that it's taking on average 2 much less time today to do your claim than it 3 4 was six years ago. 5 CHAIR ZIEMER: Yes, and those numbers wouldn't get fixed, you see, if they 6 7 didn't do any work on the old claims. That number, if you report it the next time, the 8 other end of that would go up. 9 10 MEMBER MELIUS: Yes, it's got to go up, yes. I mean, at some point -11 MR. ELLIOTT: So the information is 12 13 in there. MEMBER MELIUS: Well, but it's just 14 a confusing number. That's all. 15 16 CHAIR ZIEMER: Josie Beach. Yes Larry, back on 17 MEMBER BEACH: Slide Number 7 you said that there was 2,463 18 19 cases not assigned. Can you give me an idea and are those new cases or older 20 of why, 21 cases? MR. ELLIOTT: Well, there's a mix. 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

1 There can be old cases, there can be new 2 There's cases just coming in that cases. haven't been assigned because the new case -3 4 because we haven't got the computer-assisted telephone interview done, they haven't got the 5 6 POE information or the AWE information on That's one reason for that kind of 7 dose. claim in that category. 8 So it's not 9 MEMBER BEACH: one distinct reason, there's several? 10 MR. ELLIOTT: No. The pending, you 11 know, the active but they're pended, they're 12 13 in that group there. There's a variety of reasons why a claim may not have been assigned 14 15 to a dose reconstructor yet. MEMBER BEACH: Thank you. 16 Any further comments 17 CHAIR ZIEMER: or questions? Okay, Larry, thank you very 18 19 much again for updating us. Next we'll hear from the Department of Labor and Jeff Kotsch 20 is with us again today, and he will give us 21 the Labor update. Welcome again Jeff. 22 **NEAL R. GROSS** 

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1	MR. KOTSCH: Thank you. Good
2	morning and thanks for the opportunity to
3	provide the Department of Labor's update.
4	Often this is primarily the one that we always
5	give, other than changing the numbers. We are
6	working on the slides. And the data for this
7	set is December 4, the capture date for the
8	information on these slides.
9	Just a little background for
10	basically the people that haven't heard the
11	presentation before. The program the
12	Department of Labor administers has two parts.
13	There's a Part B which is really the part
14	that the Board is more interested in. That's
15	the part that has to do with cancer and
16	silicosis and things like that we'll talk
17	about a little bit later. Part B became
18	effective on July 31 of 2001. Since that time
19	64,346 cases or 94,650 claims have been filed.
20	I always mention that the number of claims
21	will always be higher than the number of cases
22	because when you're in a survivor claim

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1 situation you may have more than one survivor. 2 Of those cases, 42,531 have been cancer 28,316 cases have been referred to 3 cases, Now, on the other side of our program 4 NIOSH. is Part E which became effective on October 28 5 6 of 2004. This program formerly was 7 administered - was the former Part D program that the Department of Energy administered, 8 and on this side which is primarily the toxic 9 10 chemical exposure side, 54,909 cases or 76,866 claims have been filed. At the time that we -11 or the time that Part B became effective, we 12 received or 25,000 cases were transferred over 13 from Department of Energy. 14 This is the primary overview for 15 16 the program. \$4.4 billion have been paid in total compensation since the initiation of the 17 \$2.8 billion of that was Part B 18 program. 19 claims, \$2.5 billion for a non-RECA Part B conditions and \$300 million for the RECA which 20 is the Radiation Exposure Control Act which is 21 primarily administered by the Department of 22

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\$1.4 billion has 1 Justice. been Part Ε 2 payments and \$271 million in medical payments actually for both parts. So Part B is about 3 4 63 percent of the payments. Just quickly, the claim categories under Part B are primarily 5 cancer, but also include chronic beryllium 6 7 disease, beryllium sensitivity, chronic silicosis and then the RECA Section 5 claims 8 that again are basically coming from the 9 Department of Justice. 10 And just a quick overview of the 11 benefits for Part B. Who's eligible? 12 Current 13 and former employees of DOE, its contractors subcontractors, the atomic 14 and weapons 15 employers (AWEs), beryllium vendors, uranium 16 miners, millers and ore transporters who worked at facilities covered by Section 5 of 17 and certain family members the RECA 18 of 19 deceased workers. This is a summary of the Part B cancer case status and I'll primarily 20 just talk about it in terms of cases. Forty-21 two thousand five hundred and thirty-one cases 22

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1 had 65,990 claims. We've had 35,622 with 2 final decisions, 1,630 with recommended but no final decision, 3,547 referred to NIOSH but no 3 recommended decision, and 1,732 cases with no 4 initial processing. 5 DOL Those the are incoming cases primarily. The way the process 6 7 works is the case comes in, is developed for medical and - I'm sorry, developed for medical 8 employment. Ιf it needs dose 9 and а 10 reconstruction it's transmitted to NIOSH. We receive the final dose reconstruction back 11 from them, back to the district office. 12 They 13 then render a recommended decision. At that point the claimant is allowed the opportunity 14 15 to provide comments, objections, or basically 16 contest the decision. That goes to our final adjudication branch which is the FAB which is 17 separate from the district office. They 18 19 review that information. If they deem that it return to NIOSH it will go back 20 merits to it merits additional work NIOSH. Ιf 21 of development it'll be done. After all that's 22

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1 done then render the final decision. So
2 that's the distinction between a final and a
3 recommended decision.

Claims filed for cancer under Part 4 Potentially any cancer that's claimed 5 в. under Part В of the program, if it is 6 7 determined that the covered employee was a member of the SEC and was diagnosed with a 8 specified cancer or it is determined from the 9 10 dose reconstruction conducted by NIOSH that the employee's cancer was at least as likely 11 as not, which is 50 percent or greater, caused 12 13 by radiation exposure. And this is just the chart of the decisions, 14,948 final 14 bar 15 decisions for approval, 20,674 final decisions 16 for denial. Of those, you the can see The primary one is the 12,441 for 17 breakdowns. Probability of Causation of less than 50 18 19 percent.

The special exposure cohort, the SEC, the statutory one or the three diffusion plants, gaseous diffusion plants, K-25,

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Paducah and Portsmouth, and certain nuclear 1 2 tests at the Amchitka site and then any other new designations where we add or classes are 3 4 added to the SEC. Within that, or another that is you 5 requirement of have have to 6 specified cancers. Causation is presumed. 7 There's no dose reconstruction except for the - obviously for the non-specified cancers or 8 the ones required for medical benefits for an 9 And HHS recommends the SEC class 10 SEC case. designations and as the process goes, if 11 Congress says - at the point that it goes to 12 13 Congress, if it does not object within 30 days the facility becomes an SEC. The new SEC-14 15 related cancers, the numbers here are 2,275 16 cases have been withdrawn from NIOSH for review, 2,042 have final decisions issued, 84 17 recommended but of those have no final 18 19 decisions, 66 cases are pending and 83 cases have been closed for a variety of reasons. 20 So we've got 92 percent of the SEC-related cases 21 have final decisions. 22

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slide 1 This shows the status of 2 referrals to NIOSH. Twenty-eight thousand three hundred and sixteen cases have been 3 21,000 of those 4 referred to NIOSH, I'm sorry, 21,757 have been returned from NIOSH. 5 And the breakdown that we show from our 6 7 database is 19,026 are at DOL with a dose reconstruction, 30 are being reworked for 8 return to NIOSH - "rework" is probably not a 9 10 good word here because it doesn't have the same connotation as the other rework, 11 but they're within DOL being reviewed - 2,701 are 12 13 withdrawn from NIOSH with dose no The other part of that is 14 reconstruction. 15 6,559 cases are currently at NIOSH according 16 to the information in our database. Of those, 3,597 are initial or original referrals and 17 2,962 are reworks or returns. This is the pie 18 19 chart for the status for dose reconstructions. We're showing 19,026 cases at DOL with a dose 20 reconstruction. Of those 16,390 have a final 21 decision. That's 86 percent of the total. 22

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1 Twenty-one hundred ninety-three cases have a 2 recommended but no final decision. That's primarily that they're the final 3 at adjudication branch in that portion of the 4 443 5 process and cases pending are а 6 recommended decision by DOL. That is, they're 7 at the district office pending a, you know, developing the recommended decision. 8 The case-related compensation 9 10 statistics or data are \$1.1 billion in This is for compensation. NIOSH 11 cases.

That's 11,356 payees in 7,432 cases. 12 Of that, 13 \$887 million on dose reconstructed cases with payments to 8,430 people in 5,934 cases, and 14 15 \$222 million on added SEC cases. Those are 16 the new classes. Payments to 2,926 people in And this is the pie chart for 17 1,498 cases. that, for the breakdown of paid cases under 18 19 the program. This is both Part B and D and That breaks down the total is 34,796 cases. 20 to 22,556 Part B cases and 12,240 21 Part E And the Part B cases break down to 22 cases.

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14,700 cancer payees, a little over 6,000 RECA case payees and 1,848 other Part B case payees which would be silicosis and some of the other ones. So 43 percent of the payments under the program are cancer cases.

This is just a quick summary of the 6 last four months of cases received and sent to 7 New Part B cases received by the NIOSH. 8 of Department Labor 9 in August was 405, 10 September 354, 398 in October and 285 cases in November of 2008. And then cases sent to 11 NIOSH by Department of Labor, 424 in August, 12 13 377 in September, in October it was 378 and 251. November it was And I think these 14 15 numbers - obviously, they must include some 16 extent, and I don't know why they haven't teased it. Tt. must include 17 out. rework statistics too there because obviously we're -18 19 some of those numbers are bigger than the receipt ones for each month. But I think 20 we'll try to tease that out next time, but I 21 think it had been asked in the past basically 22

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1 what was our baseline, or what level did we 2 seem to be moving towards as far as incoming And it's - I've always said it's 3 cases. around 200, 250 kind of thing, and this is in 4 the general ballpark I think, or 5 at least cases being referred to NIOSH. So I think 6 7 that surplus is probably some - a reflection of the rework number. 8 At every meeting we try to give a 9 10 little bit of information on what we perceive or at least listed as the classes - or the SEC 11 classes that are going to be presented to the 12 13 Board. For Savannah River site this is a summary to date as of, again, December 4. 14 The 15 number of cases for both Part B and E, and B and E are applied - I mean, E applies to DOE 16 facilities - 10,483 cases or 13,824 claims for 17 the Savannah River site, 2,529 NIOSH dose 18 19 reconstructions. We have final decisions on the Part B side of 3,541 cases and on Part B 20 we have 1,178 approvals. Part E approvals 21 number 1,445 for total compensation for both 22

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Part B and D of \$264 million. For the Metallurgical Lab at the - in Chicago we're showing 65 cases or 106 claims, five dose reconstructions, 20 final positions under Part B, 17 Part B approvals, 10 Part E approvals and compensation of \$3.6 million.

For Mallinckrodt Destrehan Street 7 we're showing 1,567 cases or 2,482 claims for 8 both Ε, 182 9 Part В and NIOSH dose 10 reconstructions, 520 Part B final decisions, 383 Part B approvals. The number of Part E 11 approvals were 226 and total compensation for 12 13 both Part B and D was \$77.6 million. For vitro manufacturing in Mechanicsburg, 14 15 Pennsylvania we show 68 cases or 100 claims. 16 This is only Part B sites. We've got 10 NIOSH dose reconstructions, 21 final 17 Part. В decisions, six Part B approvals, the Part E 18 19 doesn't apply to this site and so total compensation is \$825,000. And any questions? 20 CHAIR ZIEMER: Wanda Munn? 21 MEMBER MUNN: Jeff, do you have any 22

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information that would shed some light on the 1 2 discrepancy between the OIG's figures for DOL and NIOSH? 3 I actually wasn't 4 MR. KOTSCH: involved very much or really at all in the 5 6 review of those numbers so I'd have to get 7 back to you. I have to admit I don't know the origin or the discrepancy for our numbers and 8 NIOSH's numbers. 9 10 MEMBER MUNN: Well, it's large enough to be a little disconcerting and any 11 information that you might be able to provide 12 13 would certainly be -MR. KOTSCH: Yes, I'll go back and 14 15 check. I don't - I often blame our system 16 because I know it looks at numbers, or we track things a little bit differently than 17 NIOSH, but I admit a difference that large is 18 19 Well, we never, at 20 MEMBER MUNN: least I personally never think too much about 21 a few hundred cases. I can see how the system 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS

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alone would do that, but that - those figures 1 2 are significant in difference. MR. KOTSCH: Yes, I agree. 3 4 MEMBER MUNN: And I was a little concerned. 5 6 MR. KOTSCH: Let me look into that and get something. 7 MEMBER MUNN: If the OIG is getting 8 information that's not accurate then in either 9 10 case it would certainly be beneficial for this board to know where the problem is with the 11 reporting. 12 13 MR. KOTSCH: Okay. Yes, let me report back. 14 15 CHAIR ZIEMER: Jeff, during Larry's presentation it was mentioned that in the 16 Inspector General - was it the Inspector 17 General's report? 18 19 MEMBER MUNN: Yes. CHAIR ZIEMER: Yes. That 20 communication be the sole responsibility of 21 the Department of Labor and Larry indicated 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

that NIOSH certainly didn't agree with that. 1 2 I'm wondering if the Department of Labor has any official position that you're aware of on 3 And I think here we're 4 that same issue. NIOSH interactions 5 talking our - the with 6 claimants deals specifically with dose 7 reconstruction issues normally, but in any event, is there a Labor position on that or is 8 it premature to ask? 9 10 MR. KOTSCH: I think - I don't want to comment on that because I'm not sure what 11 the position is yet. 12 13 CHAIR ZIEMER: I was only asking you if there was one. 14 15 MR. KOTSCH: Yes, I'm not aware of 16 it. Okay, thank you. 17 CHAIR ZIEMER: Is this on? MR. ELLIOTT: If you 18 19 look at the Assistant Secretary for Labor's memo in response you'll find there that she 20 disagrees with that. And I don't know if 21 that's the Department's position or not, but 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

she does make that statement.

2	CHAIR ZIEMER: That is on the
3	record, yes. Okay, thank you, that's helpful.
4	Mark, did you have a question? Same as
5	Wanda's, okay. Other questions? It seems
6	that Dr. Melius has a question even not being
7	here. He did have to step out for a little
8	bit, so. If there are no further questions
9	then Jeff, thank you very much again for this
10	update. We want to make sure that the
11	discussion on the Metallurgical Lab occurs
12	very close to 11:00 because there may be
13	petitioners on the line, so I think we'll go
14	ahead and take our break at this point. We
15	can our breaks tend to take a little longer
16	than we plan on anyway, so let's all take a
17	break and then we'll resume shortly before
18	11:00.
19	(Whereupon, the above-entitled
20	matter went off the record at 10:20 a.m. and
21	resumed at 11:02 a.m.)
22	CHAIR ZIEMER: We are ready to
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reconvene. Let me check and make sure we have 1 a phone connection. Dr. Roessler, are you on 2 the line? Dr. Roessler, are you still on the 3 line? 4 MEMBER ROESSLER: I am. 5 I was doing my un-mute. I'm here. 6 7 CHAIR ZIEMER: Thank you, thank you for being muted and un-muted. Okay, the next 8 item on our agenda is the - oh yes. 9 Α reminder from our Designated Federal Official. 10 I'll let him do the reminder. 11 Just a reminder for the MR. KATZ: 12 13 people that are on the telephone to please mute your phones, press \*6 if you don't have a 14 15 mute button. Earlier in the day we could hear someone breathing along with the discussions, 16 and I understand that some people on the line 17 had difficulty hearing some of the speakers so 18 19 we hope we fix that. We're going to have a lavaliere mic for the speakers. 20 That should take care of that. And I hope - let me know 21 right now if you can't hear me or the members 22

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60 of the Board well. 1 MR. MCKEEL: It's very weak. 2 MR. KATZ: It's very - I'm sorry, I 3 had a hard time hearing you. 4 MR. MCKEEL: This is Dan McKeel. 5 Your voice is kind of medium to low. 6 7 CHAIR ZIEMER: We're hearing you better now Dan also. Can you hear me well 8 now, Dan? 9 10 MR. MCKEEL: Yes, I'd say it's probably 80 percent of what normal should be. 11 CHAIR ZIEMER: 12 Okay. 13 MS. KUNTZ: I hear Dan very well. This is Lafern Kuntz. 14 15 CHAIR ZIEMER: Okay. 16 MEMBER ROESSLER: This is Gen. Ι think the volume maybe could be a little 17 higher. 18 19 CHAIR ZIEMER: Maybe the local person here will be able to - he's jacking 20 that up. Is that getting better now? 21 22 MEMBER ROESSLER: You sound good **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

1 now. 2 CHAIR ZIEMER: Okay, good. MR. MCKEEL: Yes, good. 3 I think we're there. 4 CHAIR ZIEMER: So then put your phones on mute so we don't 5 6 get that heavy breathing. I know this is an 7 exciting session, but no heavy breathing allowed. 8 (Laughter.) 9 10 CHAIR ZIEMER: Let's proceed. Metallurgy Lab which is an 83.14 petition. 11 The evaluation report will be presented by 12 LaVon Rutherford from NIOSH and then we will 13 have an opportunity perhaps to hear from the 14 15 petitioner by phone. Okay. Or no, Stu 16 Hinnefeld is playing the role of LaVon Rutherford today. 17 Right. MR. HINNEFELD: Whenever 18 19 I've been an acting boss, I tell people I've been acting my whole career so today I'll try 20 to act like LaVon. LaVon is sick. He called 21 me Saturday to let me know he was getting sick 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS

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1 and warned me that he might not be able to make the trip. So I said okay, being a good 2 quy I said don't worry about it, I'll give the 3 presentation, and didn't think another thing 4 about it. And then later on I realized I'd 5 just fallen for what he was leaving me, this 6 7 line that he was giving me. So I figured that after learning that it worked so well I'm 8 looking at future agendas so that I can plan 9 10 my malady appropriately. (Laughter.) 11 MR. HINNEFELD: 12 Anyway, LaVon 13 actually is sick and couldn't make the trip so I'll be presenting today the Metallurgical 14 15 Laboratory. Metallurgical Laboratory was part 16 of the University of Chicago and I think as we qo along you'll - a lot of this work will 17 sound familiar to you if you have 18 some 19 knowledge of the history of the program. Here's the petition overview. We evaluate the 20 petition in accordance with Part 83.14, that's 21 what we call it, a .14 petition. And this is 22

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1 the circumstance where the petition is 2 submitted claimant whose by dose а reconstruction we could not complete. 3 We determined that it was not feasible for us to 4 5 do this person's dose reconstruction. We informed them of that, sent them I think it 6 7 was a Type A petition or a Form A petition and suggested that they sign that and send it in 8 to make the petition. The petitioner was 9 10 employed at the Metallurgical Laboratory from 1943 through the end of - or through 1952, and 11 I have to amend this slide. This slide's been 12 13 kind of overtaken by events. The current period the Metallurgical 14 covered on Lab 15 actually ends in 1946 and that has a change 16 that's been made very recently. That change is reflected on the DOE's facilities database. 17 I looked this morning and the ending date of 18 19 1946 is reflected on that. And we encountered that information in our research as we were 20 researching this petition. What happened was 21 the Metallurgical Laboratory became part of 22

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Argonne National Laboratory in 1946 and so the work from 1946 on forward then would be considered Argonne National Laboratory work.

determination upon evaluating 4 Our this class is that we're unable to complete 5 6 dose reconstructions for the claimant. And as 7 you can see, there are a handful of some 14 active claims in our hands who have employment 8 Metallurgical Laboratory. 9 at the The laboratory was located in Chicago, Illinois. 10 It's the predecessor to Argonne National 11 Its original classification as an 12 Laboratory. 13 atomic weapons employer was from 1942 through That's what the original dates were 1952. 14 15 assigned to that. During our evaluation we 16 found this documentation indicating that the Metallurgical Laboratory essentially ceased to 17 be as an entity in 1946 and became Argonne 18 19 National Laboratory. And the Department of Labor has concurred with this, Department of 20 Energy has concurred with this and DOE has 21 changed their facility database to reflect the 22

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2	Federal Register require a Federal Register
3	notice to change the dates. They use Federal
4	Register notices to add sites or to de-list
5	sites, but they don't require a Federal
6	Register notice to change the effective dates.
7	The University of Chicago was
8	involved in early uranium metallurgical work
9	in the way back during World War II, 1942
10	to `43. Started actually even before the
11	creation of the Manhattan Engineering
12	District. The predecessor government agency
13	to the Manhattan Engineering District who was
14	pursuing nuclear research actually originally
15	awarded the contract to the Metallurgical
16	Laboratory and that contract then was conveyed
17	over to the MED, the Manhattan Engineering
18	District when it came into existence in 1942.
19	The first self-sustaining nuclear
20	chain reaction occurred at this facility. The
21	University of Chicago, that was Enrico Fermi
22	and his colleagues, the first demonstration

1946 ending date. They do not wait for a

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1 that а nuclear reactor could actually be 2 and the primary goal for constructed, the people at Chicago was to develop methods for 3 the production and purification of plutonium. 4 You probably know that plutonium is created 5 by the neutron capture of uranium, uranium-6 7 238, in order to make -- this had been observed in laboratories where neutrons were 8 generated in fairly small quantities and very 9 10 small amounts of plutonium could be generated. And in order to generate an appreciable 11 amount of plutonium they recognized that we're 12 13 going to need a fairly constant source of neutrons and what if we can make one of these 14 15 things just run and make plutonium for us. And they were successful in doing that. 16 There are a number of facilities 17

17 Inere are a number of facilities 18 that were associated or that performed the 19 various kinds of work -- there were a number 20 of different kinds of work done -- at the 21 Metallurgical Laboratory for the MED. And 22 these facilities include the new chemistry

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1 laboratory in the Annex and the Ricketts 2 These were used for plutonium-Laboratory. uranium research and these were demolished 3 after Argonne National Lab was established. 4 The West Stands which I believe are maybe the 5 west stands of the football field. There's a 6 7 squash court I think according to history is actually what was taken over to build the 8 pile. CP-1 stands for I believe Chicago Pile 9 10 1, the first one, and that's where it was first sustained chain constructed, the 11 It operated into 1943. 12 reaction. It began 13 operation in 1942. I think it was in December of 1942 when it actually achieved criticality. 14 15 Operated into 1943 when it was disassembled 16 and reconstructed with in а slightly \_ \_ different configuration and some additional 17 material was added to it to make it slightly 18 19 bigger. It was moved into the Argonne Forest -- this is the one outside of Chicago, not the 20 one I guess in France or wherever it is -- and 21 it was reconstructed and then called CP-2 or 22

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1 Chicago Pile 2.

2	Ryerson Physical Laboratory was
3	also used. They did research with radium
4	according to the information that we've
5	obtained. This was by actually, this was
6	not contemporary records that we saw, but
7	these were records that were generated
8	sometime later by the Argonne National
9	Laboratory re-survey group. Eckhardt Hall has
10	similarly performed a search with radium based
11	on those sources. Kent Chemical Laboratory,
12	research with plutonium, radium and uranium
13	again using the later source, and the Jones
14	Chemical Laboratory which performed research
15	with radium-226, again according to the later
16	source.

Our data capture efforts related to 17 this site include of course Argonne National 18 19 Laboratory, the DOE Legacy Management Office Archives, the Illinois 20 and Emergency Agency, the National Nuclear 21 Management Security Administration (NNSA), NRC Agency-22

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1 wide Document Access and Management, what they 2 call their ADAMS database, and other records at the NRC, Washington State University -- the 3 part of Washington State University which is 4 the U.S. Transuranium and Uranium Registries, 5 Washington University Libraries in St. Louis. 6 7 The DOE opened that which is an OSTI database. Internet searches, DOE's 8 epidemiology database, CEDR. I think that's a 9 10 comprehensive epidemiological data repository I believe is what CEDR stands for. Hanford 11 DDRS which is 12 some document record system, declassified maybe? National Academy Press. 13 see we tried quite a number of 14 As you can 15 learn what could, avenues to we learn 16 additional information about this work that occurred at the University of Chicago. 17 conducted interviews We of the 18 19 claimants who have filed claims and from that we can find information that would help us 20

21 very much in doing dose reconstruction. It
22 wasn't sufficient to complete dose

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reconstructions, the information we received. 1 2 We have such a small amount of data available personal exposures and radiological 3 about 4 conditions that we really despaired of learning anything from additional interviews 5 6 and pursuing interviews, so we did not try to seek additional interviews 7 out and to qo change the determination of either our 8 feasibility determination limit 9 or to the 10 class in some fashion.

The internal sources of exposure, 11 the people who have been exposed to -- it 12 13 would have been the plutonium, uranium, fission-activation products and the radium 14 15 from the research. There plutonium was research and separations were conducted at the 16 site and there were experiments conducted on 17 uranium ores and maybe other types of ores as 18 19 well, leach liquors and raffinates from other And so they had not only just refined 20 sites. uranium, they also had materials that would 21 contain the uranium progeny in various -- and 22

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2 disturbed by various operations that were done there. External sources of exposure would be 3 photons, neutrons and beta from the operations 4 involving the uranium, plutonium, the radium, 5 fission-activation products and then some 6 7 exposures from the reactor operations as well. internal monitoring data, we For 8 have I think 15 radon breath samples from -9 10 actually, we have samples from 15 workers in a couple periods of time, 15 workers in February 11 of 1945 and three workers in May of 1945. 12 13 This is a bioassay technique for radium body We didn't really learn much about burden. 14 15 interpretation technique for these results so 16 it's not entirely clear that we'll be able to use these in any fashion and they certainly 17 would, given the small number they would 18 19 probably only be relevant to the actual person that the sample was taken from. 20 We've been unable to build any kind 21 of а coworker

then the equilibrium among those things were

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estimate from that.

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1 sampling for one of the buildings, the New 2 Chemistry Laboratory at one time, it but comprehensive for that 3 wasn't even time We don't know of any 4 period. Hard to relate. way we could relate those to actual breathing 5 zones that people were exposed to. And there 6 7 were some contamination surveys for brief periods in that building as well. Again, not 8 so much we felt like that was characterized to 9 useful 10 the extent that it could be for determining individual exposures. 11

External Monitoring Data. We saved 12 13 some external dose records. I think we might I think we have one of the 14 just have one. 15 claimants who has photon exposure data. So 16 hardly a comprehensive lasting or a complete listing. There are a few isolated radiation 17 again from the New Chemistry 18 surveys 19 Laboratory. We don't know very much about the 20 medical X-rays. We think we can probably reconstruct that using standard documents that 21 we use, complex-wide documents that we use. 22

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1	We have requested the dosimetry-			
2	related information from the DOE for the			
3	claimants. And like I said, in one case there			
4	was a physicist who had some external gamma			
5	dosimetry results. No neutron monitoring data			
6	for anyone, no other external monitoring data			
7	so we really didn't receive anything else with			
8	respect to the claimants we have in terms of			
9	their exposure, their external exposure.			
10	Internal Exposures. We have the 18			
11	radon breath samples, but as I said we don't			
12	really know much about how the samples were			
13	analyzed or the interpretation thereof. We			
14	have no other personal bioassay data, no urine			
15	results at all or fecal. There are			
16	insufficient data from which to draw			
17	conclusions regarding the potential magnitude			
18	of internal doses from exposures to uranium			
19	and progeny, plutonium, radium and any fission			
20	products or activation products.			
21	External Exposures. We have limited external			
22	dose records exist. In other words, one			
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1 claimant, that's pretty limited. No neutron 2 monitoring personal data. or area Insufficient data from which to draw 3 conclusions regarding potential magnitude of 4 doses believe 5 external and we we can 6 reconstruct medical doses using favorable 7 assumptions and complex-wide documents that we've used in a number of cases. Now, if we 8 in fact have any personal monitoring data that 9 10 we do have or becomes available for employees if in fact we have to do a dose reconstruction 11 for anyone, for instance if they were 12 not 13 included -- if a class is added they're not included in the class by reason of not having 14 15 an SEC cancer. Then if we have data for an 16 individual we will use it in that person's dose reconstruction to the extent we're able 17 to. 18 19 So, summary then of our а We concluded we feasibility determination. 20 cannot reconstruct internal or external doses, 21 well all. internal doses at Don't have 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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sufficient data to reconstruct external gamma, beta or neutron doses except in the one case where we have the photon exposure for the one person which we will utilize, and we do intend to attempt to reconstruct medical X-ray doses.

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Okay, if our health endangerment 6 determination evidence 7 reviewed in this evaluation indicates that some workers in the 8 class may have accumulated chronic radiation 9 10 exposures through intakes of radionuclides and direct exposure to radioactive materials, and 11 consequently NIOSH is specifying that health 12 13 may have been endangered for these workers, for the workers covered by this evaluation who 14 15 employed for а number of work are days 16 aggregating at least 250 work days within the parameters established for this class or in 17 combination with other classes. 18

19 Our proposed class is all AWE Metallurgical 20 employees who worked at the Laboratory in Chicago from August 13, 1942 -21 that was the date of creation of the Manhattan 22

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Engineer District -- through June 30, 1946 for 1 2 a number of work days aggregating at least 250 work days occurring either solely under this 3 employment or in combination with work days 4 within the parameters established for one or 5 more other classes of employees in the SEC. 6 7 So our recommendation to the Board and for consideration and our recommendation to the 8 director is that for the period of August 13, 9 10 1942, through June 30, 1946 we find that estimates radiation dose be 11 cannot reconstructed for compensation purposes. And 12 our table indicates we do not believe the dose 13 reconstruction is feasible and we do believe 14 that health was potentially endangered for 15 people who worked there. So, I intended to 16 take longer at that. I apologize for speaking 17 so swiftly. Are there any questions? 18 19 CHAIR ZIEMER: Any questions for Stu? Stu, this is a question that's more a 20 curiosity question. For the one individual 21 for whom you have external dosimetry, what was 22

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the nature of the dosimetry? Were they using some sort of a film badge? Obviously this is before the time of commercial film badges and almost before the time of even badges that -in other words, had the Manhattan District developed their own device at that time?

Well, I didn't 7 MR. HINNEFELD: foresee that question over the weekend, Paul, 8 so I don't know. Now, I don't know if LaVon 9 10 is on by phone or not. If he's on and he knows the answer he might want to speak up. 11 If he's on and he doesn't know the answer he 12 13 may want to say, you know, be quiet so we assume he's not on. Oh, he's on. 14

15 MR. RUTHERFORD: This is LaVon, I And actually from the very beginning 16 am on. when they were looking at CP-1 they looked at 17 using dentistry film, and they also had 18 19 developed ion chambers, pocket ion chambers. So I do not know if it was pocket ion chamber 20 results or film results for that individual, 21 but they were using them at that early period. 22

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1 CHAIR ZIEMER: Thank you. And then 2 the other thing, and again it's not sort of critical to this petition, but more out of 3 curiosity. Is this start date, the August `42 4 start date which is the official start of the 5 6 Manhattan District, is that before or after the actual CP-1 critical experiment? 7 RUTHERFORD: Aqain, this is MR. 8 Rutherford. CP-1 LaVon started 9 went 10 operational on December 2 of 1942. this CHAIR ZIEMER: So date 11 Fermi experiment the actual 12 captures then, which was 13 in December, the critical date, right? 14 15 MR. RUTHERFORD: That's correct. CHAIR ZIEMER: Okay, thank you very 16 much. Wanda Munn. 17 I have one question MEMBER MUNN: 18 19 with respect to the 14 claimants. Are any of those 14 claimants in a situation that you're 20 aware of where their 250-day employment period 21 relative would become issue to their 22 an **NEAL R. GROSS** 

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ability to be included in the claim?
MR. HINNEFELD: I don't know. I
don't know if LaVon knows or not.
MR. RUTHERFORD: No, I do not know.
I could check that out.
MEMBER MUNN: The other is a
comment for those who have great interest in
nuclear technology and any interest at all in
history. The people who constituted this
portion of the Manhattan Project are the men
and two women who constitute the shoulders on
which our entire basis is built in the United
States, and if there is any group anywhere
that deserves inclusion it is certainly the
individuals who worked in the Metallurgical
Laboratory under Enrico Fermi during those
very crucial years. The information that has
come out of their efforts has been the basis
for not only what transpired during World War
II and the following Cold War years, but also
for the entire science of health physics and
nuclear technology overall. So if when

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we've finished with questions I'd certainly
 like to be the person who makes the motion
 with respect to this petition.

4 CHAIR ZIEMER: Thank you. Dr. 5 Melius?

MEMBER MELIUS: Yes, I just have a 6 7 question. It may be more for Department of Labor, but it's not clearly covered in the 8 But do you anticipate any problems 9 report. 10 trying to identify who these workers were in terms of eligibility? It would seem to me, I 11 mean one, you've got this long time period to 12 13 go back to, but secondly, would, you know, how do you make a determination that people worked 14 15 in that particular department, and how do you 16 deal with other workers who might have also been exposed? Security guards for example, 17 and in other -- I just have no idea how sort 18 19 of the personnel system was set up going back that far to university. 20

21 MR. HINNEFELD: Well, I understand 22 your question and can frankly say that is in

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1 fact a DOL question. From our standpoint, I 2 mean, that determination is made before we're 3 even aware of а case, and we have no involvement in a case until it is made known 4 to us by the Department of Labor. And so a 5 6 qualification of whether this employment was 7 at the Metallurgical Laboratory or not, I have no particular knowledge of what's available to 8 do that, but that decision is made before we 9 10 have any involvement in the case. MEMBER MELIUS: I mean, I don't 11 think you can deny responsibility for -12 13 MR. HINNEFELD: I'm not trying to do that. 14 MEMBER MELIUS: -- for that because 15 16 I mean our definition, class definition may impact on that. I just want to make sure that 17 we, you know, that we have a sufficient class 18 19 definition. It may be fine. I have not individual interviews 20 looked at the and there's some discussion in this report that 21 there's been discussions with DOL, but 22 I'm

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just trying to get confirmation on that.

MR. HINNEFELD: 2 Yes, our discussions with the Department of Labor, at 3 4 least the ones conveyed in the report, had to do with the end date for the Metallurgical 5 Laboratory. And that was based on 6 our It was 7 research. fairly clear from our research that the Metallurgical Laboratory 8 simply ceased to exist, or at least ceased to 9 exist as an AWE in 1946 and became Argonne 10 National Laboratory. So that was the extent 11 of our discussion with DOE. 12 Certainly --

This is LaVon 13 MR. RUTHERFORD: Rutherford. I'd like to point out that this 14 15 is the -- under the DOE facility database, the 16 Metallurgical Laboratory is its own designation by itself and so this covers the 17 whole facility, the whole Metallurgical 18 19 Laboratory. If there were individuals or a group outside of this under the University of 20 Chicago that ultimately we determined were --21 should be included that would end up having to 22

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be a separate designation, or a separate SEC 1 2 class in itself because you cannot have an SEC class with more than one facility. 3 4 MR. HINNEFELD: Yes, from the designation standpoint we can do one case at a 5 time. Ι think your question then probably 6 7 speaks to University of Chicago employees who are exposed to these conditions. 8 MEMBER MELIUS: Right, yes. 9 10 MR. HINNEFELD: And we can certainly talk to the Department of Labor 11 You know, I don't know that Jeff 12 about that. 13 would be in a position to say anything about that. We can certainly talk about that going 14 15 forward. I mean, it's clear to us that, you 16 know, these are not dose reconstructions that are feasible for us to do, and we would -- I 17 don't think we would take any position about 18 19 excluding people because we've not found any way to exclude people who work there based on 20 control of materials and the radiation 21 only here with only those exposures 22 were

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1 people. We're not attempting to do any of that and be exclusive at all. 2 So to the extent that it's within what is typically our 3 authority to make a decision on or render a 4 recommendation on, we make no distinction or 5 separation at all. With respect to the 6 7 question of who really is an employee of the Metallurgical Laboratory, we would have to 8 approach the Department of Labor about that. 9

10 MEMBER MELIUS: Jeff, do you have I would just add, it also I think 11 comments? makes a difference in terms of the outreach 12 13 that's done. If you tell people only if you worked for a certain facility, you know, it's 14 15 defined and even though it was sort of, there 16 may have been other employees in those same buildings whatever, it 17 or is potentially confusing. Now, I don't know enough about the 18 19 history there and when Argonne took over what happened to employees and ancillary sort of 20 employees or other people that may have been 21 involved in that work. 22

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1	MR. KOTSCH: I specifically have
2	not looked at any Met Lab cases. I mean, all
3	I can say is that each one would be looked at
4	for the information that's provided, the
5	evidence of employment that's provided for,
6	you know, as being a Met Lab employee, or a
7	University of Chicago person that was working
8	at the Met Lab. And you know, the outreach
9	will be in that I don't know what form it
10	will take. It'll certainly be in that area as
11	well as I don't know where else they would
12	target. But you know, it's always based on
13	the evidence that's provided, or the
14	affidavits, or whatever, you know, information
15	is provided as far as employment goes.
16	MEMBER MELIUS: I just get worried
17	that as it gets farther down into the
18	bureaucracy, into your outreach centers that
19	if they're just focused on, you know, a narrow
20	class definition that somehow we lose the
21	potential to identify other groups which are,
22	again, I have no idea what the potential

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1 impact is here could be. And I just remind 2 that on the MIT-proposed evaluation that has been withdrawn because of of these 3 some 4 definitional issues that at one point the proposal was to include the entire university, 5 and if an employee of the university is in the 6 Here we have sort of the other -- I 7 class. had concerns that may have been too wide a 8 group, and yet we narrow it down it may be too 9 10 narrow a group and we need to think about going to be fair to the potential 11 we're claimants that we identify. Have some process 12 13 in place to identify and make sure that we don't reject people inappropriately. 14 MR. KOTSCH: Understood. 15 CHAIR ZIEMER: I'll add a comment 16 to that, maybe two comments. One is that 17 universities are notoriously open for people 18 19 to roam around or as those connected with the hand, 20 academia know. On other this project, the Manhattan Project was a highly 21 secret project at that time. I believe, I'm 22

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1 not certain of this, but one of the reasons 2 for using the stadium was I think they had stopped playing football, Chicago -- that may 3 not -- it's immaterial right now, but that was 4 not - that was one of the locations that was 5 thought to be sort of isolated from other 6 7 things. The other point I'd like to ask 8 LaVon is the CP-1 was simply an array of 9 10 graphite and uranium rods. Was there any shielding on that? LaVon, do you recall? 11 MR. RUTHERFORD: Dr. Ziemer, there 12 13 shielding, but а lot of was some not shielding. 14 15 CHAIR ZIEMER: They mostly used 16 distance, I believe. RUTHERFORD: Yes, they did. 17 MR.

There is actually some good pictures of CP-1 you can see on the site research database as well as if you do the internet search there's some pictures. There was some concrete shielding that went around it, and then they

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did use distance in their approach. But when CP-1 from to CP-2 in they went the they did add additional rearrangement shielding to the facility based on what they learned.

CHAIR ZIEMER: Right. And then 6 7 Wanda, in connection with your question on the 250 days, I think we do know that a lot of 8 those folks at the original CP-1 event went 9 10 elsewhere. For example, the hatchet man, I won't give his name although it's commonly 11 known, the one who held the hatchet to release 12 13 the boron if something went wrong and he was going to cut the rope. That was the early 14 Later I think 15 what we call a SCRAM system. 16 became the associate director of one of the national labs. We know that another person in 17 that project became the head health physics at 18 19 another national lab. And so a lot of these people went to other locations in the system 20 following that success of CP-1. They didn't 21 all stay at Argonne. Some did, but they would 22

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accumulate their days elsewhere. 1 But the reason I asked about the shielding is that to 2 some extent this looks like a criticality 3 I look at Dr. Melius because his group 4 event. is looking at that 250 day issue. And I know 5 in the pictures the group was all standing I 6 7 think at a balcony overlooking the pile. I've often wondered what kind of doses thev 8 received up there. Of course, they didn't 9 10 operate it very long, but it was a critical event. 11 Ziemer, 12 MR. RUTHERFORD: Dr. Ι 13 would say that if we did determine that, you know, the potential was there for doses, you 14

15 know, consistent with a criticality accident, 16 that would be a separate class because we would identify that as a separate class and 17 event that occurred, and would 18 SO we 19 ultimately end up with two classes for that. Instead, you would have the chronic or long-20 term exposure from 42 to 46 period where you 21 would need 250 days, and then you could look 22

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would 1 at adding а second class that be 2 identified as CP-1 operations conducted, you know, sometime during that period. So that 3 4 would be two separate classes. I would also point out that the initial wattage I think was 5 two watts. So it was very low operations. 6 7 CHAIR ZIEMER: And I would not want to characterize it as a criticality accident. 8 It was a controlled chain reaction, not an 9 10 uncontrolled one, so one would not expect the kind of doses you might have gotten at, say, 11 the SL-1 accident in Idaho. 12 Thank you. Other 13 comments or questions? Dr. Poston? MEMBER POSTON: 14 No comment -- no 15 question, but a comment. I think LaVon is 16 incorrect. There was no shielding at the CP-What appears to be shielding are large 17 1. pieces of wood which were used to hold up CP-1 18 19 because it was actually built in a spherical shape, and there's no shielding. In fact, if 20 you look at the pictures you'll see folks 21 standing on top of the reactor, you'll see 22

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folks standing beside the reactor to move the rods. The rods were moved manually, not by any mechanism, and there was no shielding between the folks on the reactor and the folks on the balcony.

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6 CHAIR ZIEMER: Thank you. That's 7 helpful. Other comments or questions? Okay, thank you Stu. Now, it would be in order to 8 have a motion. Or no wait, I'm sorry. 9 I'm 10 ahead of myself. We may have a petitioner on line, I'm not certain. 11 the Is there а petitioner on the line for the Metallurgical 12 13 Laboratory claims? I was told that there would be. 14

15 MS. KUNTZ: Yes, sir. My name is 16 Lafern Kuntz.

17 CHAIR ZIEMER: Okay. And Lafern, 18 would you like to make any comments or ask any 19 questions?

20 MS. KUNTZ: Well, I was a little 21 confused. I'm 86 today, sir, and going 22 through the reports and locations of your

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1 exposure sites, and perhaps you named the I worked on the Bikini Atoll. At 57<sup>th</sup> 2 ones. and Ellis used to be a storefront. There was 3 a young lady, [Identifying Information], who 4 later became a doctor. We all worked under 5 [Identifying Information], a physiologist who 6 was from the University of Southern Illinois. 7 He wrote a paper -- giving all of us credit, 8 the only doctor I know there at that time that 9 10 worked on radiation of dogs. Also, it wasn't mentioned about the horse stable at 62<sup>nd</sup> and 11 University which was called Site 12 В under 13 metallurgy. And I would be -- I was made supervisor in 1945, then transferred to New 14 15 And you were speaking about radiation. Chem. 16 They had something, we used to be able to check it once in awhile with our shoes and I 17 had to throw away a pair of shoes. I used to 18 19 do the blood work on those that were exposed. You would hear "pthh" and the roof would be 20 gone and the men would go into a shower and 21 come to me, and I'd draw blood and they'd go 22

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right over to the hospital for other work.

I notice Ellis Street and Site B 2 wasn't mentioned. Perhaps in another forum, I 3 4 don't know. That was under [Identifying Information] was the head hematologist and 5 6 hired me. And when I was first hired I was 7 working in outpatient laboratory in Billings Hospital and I was hired there and worked in 8 Billings on rabbits on the third and fourth 9 10 floor. And then I would be sent to West Anne where I worked on goats. We, a lot of us, all 11 should 12 of be put in that group for us exposure. We were pioneers. 13 I was told not to go on too much with talking, but I thought 14 15 it would be interesting. There were things 16 that I had seen and I'd like to write to you about it, where two little puppies -- it took 17 me years to get over it -- their hind legs 18 19 were exposed, bones, and I found them in my area where the rabbits were supposed to be. 20 And I got help for them and I collapsed. 21 Their little eyes were all over, their teeth 22

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were all over. Evidently the pregnant dog was given radioactivity when she had conceived and the puppies were distorted. And that was one of the horrible things. I can't get that out of my mind even today, but it's not too bad.

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But I thought also in Germany a boy 6 7 came back from the Army when the war was over and we saw pictures of men in the mountains 8 and they did scalp and removed their hair and 9 10 everything. And one foot would be a skeleton and the other foot would be normal. Saw no 11 shoes by them. It was in the mountains. 12 The 13 Army didn't know what it was. They were all in Nazi uniforms and it turned out that's what 14 15 I saw on the two dogs about three or four 16 years later at Site B. Somebody did the same experiment with the same chemical they gave 17 in the mountains in Germany. the men 18 Ι 19 thought maybe you'd be interested.

20 But I do hope you put our group in. 21 Everybody was exposed. We traveled around. 22 And being a pioneer, you men have more

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1 knowledge today than they were trying to seek 2 and find in those days. Thank you. CHAIR ZIEMER: Okay, thank you 3 Lafern. This 4 sounds like some early radiobiology experiments that might have been 5 6 carried out in conjunction with the project. LaVon Rutherford, is this something that has 7 been looked at? 8 MS. KUNTZ: We did plutonium and 9 10 fission mixture, a lot of that. MR. RUTHERFORD: There is 11 discussion in the site research database on 12 13 one document of some early biological, you know, early experimentation on human beings, 14 actually. 15 MS. KUNTZ: Oh, yes. 16 CHAIR ZIEMER: Was this part of the 17 Manhattan Project, LaVon? LaVon Rutherford? 18 19 MR. RUTHERFORD: You know, Dr. Ziemer, it's not clear if it was part of what 20 was -- if you looked at the report, the 21 Metallurgical Laboratory was doing a lot of 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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1 research on personnel health and safety and looking at different methods 2 including of monitoring techniques and so on and biological 3 4 effects. And there was some clinical that 5 experiments were done on what were 6 considered patients that were going to die due 7 to some, you know, illness. And it's not clear if it was conducted there -- it's not 8 clear it was conducted at the metallurgical 9 10 facility from the document that I read.

CHAIR ZIEMER: Okay. Somebody 11 to mute their phone. 12 needs We're hearing 13 about the Verizon wireless. Okay, maybe they've done that. Okay, thank you. So, the 14 15 facility that Ms. Kuntz mentioned, LaVon, 16 sounded like a separate animal facility. Is it uncertain as to whether that's part of this 17 project, or do we know that it is not, or? 18

MR. RUTHERFORD: There was animal research that was done at the facility, and it wasn't clear from the documentation we had which one of the facilities under the Met Lab

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that that activity was included in.

2	MS. KUNTZ: Excuse me, yes it was			
3	under the Metallurgy Lab, Fifth Army Corps of			
4	Engineers. We spoke to and saw General Leslie			
5	Groves constantly there and we worked there			
6	for the University Army, Fifth Army period.			
7	MR. RUTHERFORD: I wasn't saying it			
8	wasn't part of the I just was saying it's			
9	not clear where that activity from the			
10	documentation we have it's not clear where			
11	that activity was conducted.			
12	MS. KUNTZ: Oh, at 57 <sup>th</sup> and Ellis			
13	Street. They tore that building down. And			
14	Site B was at $62^{nd}$ , used to be a horse stable.			
15	Everybody around the university that's alive			
16	today. I met some doctors that knew about $57^{th}$			
17	and Ellis, and they weren't part of the			
18	project. They were new medical students.			
19	CHAIR ZIEMER: Well, as I look at			
20	the definition for the proposed class, since			
21	it's not defined in terms of buildings, but			
22	rather defined in terms of employment with			
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1	Metallurgical Laboratory, I guess that would	
2	be covered. Am I correct on that, LaVon?	
3	MR. RUTHERFORD: That is the way we	
4	intended and that's the way it's been	
5	practiced in the past. If you include the	
6	entire facility and all employees then it	
7	would include everyone.	
8	CHAIR ZIEMER: So these buildings	
9	listed in the evaluation report are there as	
10	part of your evaluation, but there's no intent	
11	to exclude people that were outside of those	
12	named buildings?	
13	MR. RUTHERFORD: That's correct.	
14	CHAIR ZIEMER: Thank you. Other	
15	questions? Dr. Melius?	
16	MEMBER MELIUS: I just want to go	
17	back to this class definition because I keep	
18	hearing it interpreted differently. Are we	
19	saying that you have to work for the	
20	Metallurgical Laboratory, be an employee of,	
21	or work at the if you worked at you could	
22	have come in from other.	
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99 1 CHAIR ZIEMER: It says "worked at" 2 right now. MEMBER MELIUS: Yes, I know, I'm 3 4 saying --ZIEMER: It doesn't 5 CHAIR say "employees" it says "worked at." 6 So that's the 7 MEMBER MELIUS: Yes. interpretation, but if -- so if you worked for 8 the University of Chicago but you were working 9 10 at the Metallurgical Lab are you covered or not? 11 CHAIR ZIEMER: Yes. I see Stu is 12 13 shaking his head yes. I believe that's the understanding. The intent is, I think as we 14 15 understand it here, sitting here, is that if 16 they worked at that. That would not be unlike cases where people work at the test site and 17 were employed by someone other than the main 18 19 contractor, subcontractor, whatever. Now actually, the Metallurgical Laboratory 20 and even Argonne, Argonne was operated by the 21 University of Chicago, so people who worked at 22

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1 Argonne or worked for Argonne were employed by 2 the University of Chicago. So I guess the Metallurgical Lab was part of the university. 3 So these are all university employees. 4 But the worked at, would allow for cases where an 5 individual might have been an outsider, 6 7 visiting investigator. You see, I don't know if Enrico Fermi worked for the university or 8 it's beside the point. 9 not, but It's 10 whoever's there I believe is covered under this. Is that correct? If they were in the 11 project, regardless of whose payroll they were 12 13 on, correct? Yes, thank you. Sir, 14 MS. KUNTZ: may Ι say something? 15 CHAIR ZIEMER: Yes, you certainly 16 17 may. This is Lafern. As you MS. KUNTZ: 18 19 gentlemen know, it was a highly kept secret in our country, and the reason the University of 20 Chicago wrote our checks was they thought we 21 were all students there. We were all young. 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS

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I was 21 when I was hired there. And it was a 1 2 big cover-up for us. It definitely was and everybody in the Metallurgical Laboratory, if 3 you read their book, Their Day in the Sun, 4 that was written by two lady doctors from Oak 5 Ridge, Ruth Howes and Caroline Herzenberg, you 6 7 would see all the names of all the women, even 8 if they were doctors. We were given equal titles that we had served our country, and 9 10 that's all I thought would help you. CHAIR ZIEMER: Thank you. Other 11 comments or questions? Dr. Melius, another 12 13 question? MEMBER MELIUS: No, I'm sorry. 14 CHAIR ZIEMER: Okay. So we have a 15 proposed class before us. We've also heard 16 the comments from the petitioner and let me 17 Wanda ask if there is a proposed action. 18 19 Munn. I recommend that all 20 MEMBER MUNN: AWE employees who worked at the Metallurgical 21 Laboratory in Chicago from August 13, 1942, 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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1	through June 30, 1946 as described in the SEC			
2	petition be accepted as a segregate SEC for			
3	all purposes, this board and its			
4	deliberations.			
5	CHAIR ZIEMER: Okay. You've heard			
6	the motion. Is there a second?			
7	MEMBER CLAWSON: Second.			
8	CHAIR ZIEMER: Brad has seconded			
9	it. If the motion carries we will have it			
10	returned to us during our workday on Thursday			
11	for the official wording that would go forward			
12	to the Secretary which will be slightly			
13	different than what was in the general motion			
14	that Wanda just made. Is there discussion on			
15	the motion? If the motion is passed then the			
16	individuals so described would become a class			
17	of the special exposure cohort. Are you ready			
18	to vote, then? We will vote by roll call vote			
19	and we will later obtain the votes of Mr.			
20	Schofield and Dr. Lockey. So Ted, if you'll			
21	call the roll call we'll do the voting.			
22	MR. KATZ: Yes. Beginning, Ms.			

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1	Beach.	
2		MEMBER BEACH: Yes.
3		MR. KATZ: Mr. Clawson?
4		MEMBER CLAWSON: Yes.
5		MR. KATZ: Mr. Gibson?
6		MEMBER GIBSON: Yes.
7		MR. KATZ: Mr. Griffon?
8		MEMBER GRIFFON: Yes.
9		MR. KATZ: Dr. Melius?
10		MEMBER MELIUS: Yes.
11		MR. KATZ: Ms. Munn?
12		MEMBER MUNN: Aye.
13		MR. KATZ: Dr. Poston?
14		MEMBER POSTON: Yes.
15		MR. KATZ: Mr. Presley?
16		MEMBER PRESLEY: Yes.
17		MR. KATZ: Dr. Roessler on the
18	phone?	
19		MEMBER ROESSLER: Yes.
20		MR. KATZ: And Dr. Ziemer?
21		CHAIR ZIEMER: Yes. The motion
22	carries.	We will obtain the votes of the
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1 others as quickly as possible. I want to tell 2 you that it is our intent to, once we have the formal motion at the end of this week, to move 3 that forward very quickly to Health and Human 4 Services, to the Secretary in the hopes that 5 he can push that forward before we get into 6 7 more of the transition and perhaps this class can be added by the mid-January date when the 8 Secretary will leave office and we 9 current 10 will have a new group coming aboard. And that's -- not that we wouldn't want the new 11 handle it, but I think 12 iust group to to 13 expedite it so it's not behind the curve as far as a lot of new people coming aboard. 14 So 15 we'll do our best to move this out. The 16 official motion normally charges the chair to do this within 21 days and I just want to tell 17 you that the intent would be to try to do this 18 19 yet this week if we're able to. We'll give you 21 20 MEMBER MELIUS: hours. 21 CHAIR Twenty-one 22 ZIEMER: hours **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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1 would be a new record, but we will move it 2 forward very quickly. Thank you. Any other And thank you, Ms. Kuntz, for comments? 3 4 joining us today. We appreciate your input on this as well. 5 MS. KUNTZ: I thank you, sir. Only 6 7 in America could something like this be done. God bless all of you. 8 CHAIR ZIEMER: Thank you very much. 9 10 We are approaching the lunch hour so we are going to recess till 1:00 p.m. and we'll 11 resume our deliberations at that time. 12 Thank you all. 13 the above-entitled 14 (Whereupon, matter went off the record at 11:54 a.m. and 15 resumed at 1:22 p.m.) 16 CHAIR ZIEMER: We are now ready to 17 I've instructed our Designated reconvene. 18 19 Federal Official to modify tomorrow's agenda so that we have a slightly longer lunch hour. 20 I think logistically it's been very difficult 21 for people to get their food and get their 22

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bills and back, so we'll extend that tomorrow a little bit to accommodate. And our apologies to those standing by by phone, but logistically we're just not able to all get back here within the hour timeframe.

The next item on our agenda is the 6 7 Department of Energy update. However, Dr. Worthington was stranded halfway here due to 8 That is, I think the fog was here and 9 fog. she couldn't get here from Atlanta. 10 But in any event, she's on the plane now and en route 11 so we're going to delay the DOE update until 12 13 Dr. Worthington arrives. We're hopeful that she will be here in mid-afternoon in which 14 15 case we will delay the official adjournment 16 time which is currently scheduled for 4 It says adjourn, it would really be 17 o'clock. a recess technically since the meeting will 18 19 continue after that with the public comment 20 period. But in any event, we'll plan tentatively to hear the Department of Energy 21 update somewhere later in the afternoon after 22

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we complete the work on the Savannah River
 petition.

Now we do want to keep the Savannah 3 River discussion at sort of a time certain 4 because there may be individuals by phone or 5 6 others who were planning to be here for that 7 that are planning to arrive around the 2 o'clock hour, so what we will do at the moment 8 is to move one item up from tomorrow's agenda, 9 10 and that is а report from the Board's contractor, SC&A. It currently is on your 11 agenda for 2:15 tomorrow. It's called Review 12 13 Closeout Process. And so I've asked John Mauro if he would present his comments at this 14 15 time and he's agreed to do that. So I'm 16 pleased to have Dr. Mauro come on behalf of He's going to talk about the closeout 17 SC&A. process. And let me preface this by reminding 18 19 those who are here that at the present time our contractor is perhaps what you would call 20 in limbo because we are in the process, that 21 is the Board is in the process of recompeting 22

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1 the contract, and the Board's work is done on 2 that and the agency, the federal agency that assists us with this has done most of their 3 work but we're waiting for the final decision 4 on the selection of the contractor for the 5 next 5-year period. So until we know whether 6 7 or not that will be SC&A or some other entity we are not in a position to officially proceed 8 with very much new work, but at least we have 9 10 some old work that has to be closed out by the present contractor. And John Mauro is going 11 to talk to us a bit about the plans on moving 12 13 forward on the closeout process. John? Thank you, Paul. 14 DR. MAURO: Good 15 afternoon everyone. As Paul pointed out, John

I'm the project manager for Sanford, 16 Mauro. Cohen & Associates. We're the contractor to 17 the Board. We have been for the past five 18 19 And I'm going to summarize where we years. 20 are as of today. Our contract actually I believe officially ends tomorrow, and what I'm 21 going to do is try to give a rundown. 22 This

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1 very first slide is an attempt to capture the 2 story on one slide. I usually like to start with the end of the story, and then we'll back 3 away and go into some of the details. 4 The for all intents - you can think about the work 5 that we do for the Board as falling into two 6 7 categories. One is we prepare major reports, and these are large documents that go and are 8 submitted to the Board, and they go up on the 9 10 Board's website and become available eventually for everyone to look at. And then 11 once that work product is delivered to the 12 13 Board, then the Board usually authorizes a work group which is a group of individual 14 15 board members where together we meet in 16 working sessions to discuss the issues that we have raised as a result of the work we did. 17 And that's called a closeout process. 18 19 Now, the first item on this slide for all intents 20 here basically says, and

deliverable which is still active, 22 we have

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purposes, with

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1 delivered all our work products to the Board. 2 They're large documents sitting on the shelf or electronically. The single deliverable 3 that has not been delivered yet is a set of 4 dose reconstruction audits. 5 There area 18 dose reconstructions that we were given to do 6 7 a review of, I quess about a month or so ago, and we're pretty close to finishing that up. 8 But that particular work product will not be 9 delivered to the Board prior to the end of 10 this contract unless the contract is extended 11 a little further. So what that means is all 12 13 our work is done except for the closeout of issues, and that's not a small thing. 14 As we have all experienced, deliver 15 as we our reports we find that we have many comments on 16 the work products prepared by NIOSH, and then 17 we meet and we discuss some of the concerns we 18 19 have. And Item Number 3 says well listen, if you step back and look at all of the work that 20 was done over the past five years, you know, 21 where are we on closing out all the issues? 22

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And I think it would be fair to say that we're 1 2 about 50 percent complete. There's still a lot of issues that have to be closed out. 3 4 It's going to take some time to address those issues and close them out. The good news is 5 that even though the contract's coming to an 6 end and there's still a lot of closeout work 7 to do, there are a lot of resources left in 8 the contract. We estimate as of today we have 9 10 about \$400,000 left in our budget. That translates to about 300 work hours. So in 11 effect we have some resources available that 12 will allow us - that's available to continue 13 the closeout process. 14

And what I did then is say, okay, 15 16 given that we have 300 work hours left in the budget - I'm sorry, 3,000. Did I say 300? 17 Three thousand. What does that mean? That 18 19 means well, let's take a look at the work that remains that needs to be done. The work that 20 needs to be done, I put them in what I 21 consider to be the priority, the things that I 22

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1 think are most important. Certainly the Board 2 may see it differently, but I thought it might be helpful. I'll just lay them out. 3 The 4 first item that Ι think is the highest completion of 5 priority is the the issues 6 resolution process on active SEC petition 7 evaluation report reviews, such as the Savannah River site profile construction 8 worker SEC petition which is the discussion -9 talking about that a little bit 10 we'll be And we estimate that in order to later. 11 SEC petitions evaluation 12 complete all the 13 reports that are still before us, whereby we've done the work and now we're in the 14 15 closeout process of those, we're going to need 16 about 1,650 work hours. And we go down the The second item I put complete issues 17 list. resolution on procedures. We've reviewed 18 19 about over 100, maybe 130 procedures that are their 20 used by NIOSH to do dose reconstructions. And we estimate that we've 21 completed the review, and we'll get into a 22

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little more detail on this, but about half of those issues. There are a lot of issues, hundreds of issues, but to finish that closeout we're going to need about 350 more work hours.

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Moving down the row. There are 6 also - I mentioned earlier there's one set of 7 dose reconstruction audits that we were asked 8 to do as part of our existing contract that 9 ends tomorrow to review one set of cases. 10 We estimate that we're going to need about 300 11 work hours to finish up that work. 12 And then 13 the next item down is - that would be to actually do the dose reconstruction audits 14 15 themselves and put a report out, a piece of 16 paper that goes on a shelf. But then the next says complete 17 item underneath that issue resolution on dose reconstruction reviews. 18 19 That's the process. Now once we finish doing the dose reconstruction audits, we have all 20 our findings, then we go through the process 21 of resolving the issues. That's about 300 22

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1 work hours.

2	Now, you'll notice that those first
3	four items I put in bold. You add those up,
4	that's about - we basically have enough
5	resources left over from the previous contract
6	to do those first four items. Now, the three
7	items beneath that, well the two items beneath
8	that, sorry, we don't have enough resources to
9	complete. And I said complete issue
10	resolution on active site profile reviews.
11	There are several site profile reviews that
12	there are active work groups, we're attending
13	to the issues, but we still have work to do.
14	And we estimate that to finish that we're
15	going to need 550 work hours.
16	And finally, there's the issues
17	resolution on what I call the inactive site
18	profile reviews. There are a number of large
19	site profile review documents that SC&A has
20	issued that are sitting on the shelf that we
21	really haven't been able to get to. It wasn't
22	possible to form the Work Groups, to initiate

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1 the Work Group meetings and get the work 2 We estimate that'll require about started. 1,900 work hours to finish that work. So what 3 4 I'm really saying is we've got leftover 3,000 work hours in the bank so to speak that we can 5 draw upon, but we've got 5,050 work hours of 6 7 work to do. So the bottom line is that we're basically coming up short in terms of getting 8 all our work done, the five years worth of 9 work that we did. It would have been great if 10 we could have said today, I could have come 11 before you all and said we're 12 done. We 13 finished all the work, closed out all the issues, you can go home. But no, the reality 14 15 is we still have work to do. We have - we're 16 going to need - basically to do that work it's going to cost, projected shortfall is about 17 \$250,000, \$300,000, on that order. What does 18 19 that mean? That means the next contract is going to be burdened with that. So whoever 20 your next contract is, we certainly hope it's 21 us, we haven't heard yet, but that contract 22

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will be burdened with not only doing its own 1 2 work the next fiscal year, but also with closing out this work. And we think it's 3 4 going to burden that next year's work at a cost of about \$250,000. I have to say that 5 that ain't bad. I mean when you think about 6 7 it, it was about а \$13 million contract. We're effectively coming up short about 8 \$250,000. So that's the roll-up, that's the 9 10 end of the story. But now we're going to back up a little bit and say how I got there. 11 We're first going to talk about -12 13 see that? the status of everyone can \_ This is the SEC. In other words, 14 closeout. 15 this is the - if someone says what did you 16 folks do with regard to supporting SEC reviews and supporting the Board. The first column is 17 a listing of all of the SEC petition and 18 19 evaluation reports that SC&A reviewed on behalf of the Board over the past five years. 20 The next column over says the status of that 21 deliverable, the book that we delivered. 22 We

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have delivered or are in the act of delivering 1 2 all of them. You'll notice that there are a few that have asterisks next to them. The 3 last few, couple of asterisks. 4 One of the logistics problem that have emerged, 5 and I guess we're going to hear more about that when 6 7 DOE is here, is we have three documents, Santa Susana, Pantex, Savannah River construction, 8 that have been completed and are on various 9 10 stages of review by the Department of Energy. The Department of Energy likes to see all our 11 work products before they are released for 12 13 public consumption. So we like to think that we've finished our work, but quite frankly it 14 15 still has that one last step to go. So I'd 16 like to say that we have delivered all our work products or for all intents and purposes 17 have delivered all our work products, but then 18 19 the next column over says the status of completed means 20 closeout. Now, from our perspective I think we've done all our work. 21 That is, we have done all the technical work, 22

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1 delivered our work to the Work Groups, to the 2 Board, and we believe our work is completed. However, there are a number of active SEC 3 4 petition reviews and closeouts, and I've indicted you'll see the word active. 5 For example, Fernald is active. And we believe, 6 7 based on as best we can tell, we're going to require about 300 work hours to support the 8 closeout process for Fernald. 9 And you can 10 see, that's our breakout of where we - on that first slide if you remember I said it would be 11 about 1,650 work hours to support the closeout 12 13 of all the SEC petitions. Well, that's where the 650 comes from. So that gives you - I 14 15 guess if you step back and say what is it we 16 have in front of us, we still have lots of work to do on Fernald, we have lots of work to 17 do on Mound, NTS, LANL and Hanford. 18 19 You'll notice I have Blockson. Ι

20 know it's been a subject for a great deal of 21 discussion. We had some work right up until 22 last week, but I think by and large the work

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is complete. My experience is that very often though we think our work is complete sometimes there's always a little bit more to do. But you know, for all intents and purposes that's probably a fair representation of where SC&A stands in terms of supporting the Board on SEC petition reviews.

One of the other major activities 8 that SC&A took on over the past five years was 9 10 the review of procedures. On this slide we indicate that there are about 101 procedures 11 that we reviewed. It turns out there are a 12 13 few more than that, but this is probably a pretty good picture of where we stand. 14 Those 15 of you involved in the procedure work group meetings familiar with these 16 are verv different categories of status. For example, 17 we have found a way of sorting all - think of 18 19 each procedure, each of the 101 procedures has a certain number of findings. They could have 20 10 findings, 15 findings, and then we meet 21 with the Work Groups and we - the Procedures 22

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1	Work Group under the direction of Ms. Munn and
2	we one by one close out the issues as best we
3	can. Bottom line is you'll see if you go down
4	that list a little bit, the number of closed -
5	out of the total number of findings, 485, 215
6	have been closed which, means that's it, we're
7	done. We've come to an agreement of some
8	sorts. Either SC&A has agreed no, we were
9	wrong, NIOSH is right, we'll withdraw our
10	finding, or NIOSH says no, I think you're
11	right, we better fix that. And they fixed it.
12	There's another category called in
13	abeyance, and you'll see the number 63. This
14	means that SC&A and NIOSH have come to an
15	agreement on the solution to the problem,
16	except that the actual procedure that
17	implements it has not yet been revised. So
18	when you add those two up, the 215 to 263,
19	that's why I say I think we're - that's 260.
20	That's close to 260, 273, 278 out of 485.
21	We're more than halfway home. And by the way,

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the room. Steve runs our procedure review program. That doesn't reflect the fact that we just recently had a very good procedure review meeting where we closed out a whole bunch. So we're in even better shape than it appears on here.

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Really, the - when all is 7 Okay. said and done, I think one of the main roles 8 in supporting the Board has been 9 of SC&A 10 reviewing dose reconstructions performed on behalf of individuals. You'll see that there 11 have been, every so often the Board would give 12 13 a group, a package of dose reconstruction audits to us to review. They usually come in 14 15 chunks of 20 cases, sometimes they come in 16 larger numbers than that, but if you add them all up I think we're at about 240. So over 17 the period of five years we've audited about 18 19 240. For every single audit we have a number findings. 20 of The next column over, for example, Row Number 1, it says Set Number 1, 21 there were - we reviewed 20 of these cases. 22

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1 These are real people dose reconstructions. 2 Out of those 20 cases we had 79 findings. The places where we had some point of concern 3 4 related to that dose reconstruction. And 5 you'll the next column where it see says percent of findings closed. That's 100 6 7 percent. So for the first set of 20 all issues have been resolved. So if you go down 8 that row you'll see that each set, a lot of 9 10 them we really closed everything out for all and purposes right up through the 11 intents sixth set of 20 cases. 12 We're at right now, 13 under the direction of Mark, where's Mark? There he is. We're still working real hard on 14 15 the seventh, eighth, ninth set, and the tenth set as I mentioned before hasn't even been 16 delivered yet. It probably won't be delivered 17 till February. That's the way things are. 18 19 But you can see that, when you look at the grand scheme of things, we're about halfway 20 home again on the procedure reviews. 21 But we still have work to do. 22

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1 Okay, now we're moving into the 2 site profiles. This is the area where I guess we still have lots to do. I'll just put this 3 The left-hand column lists every 4 much on. site profile that we reviewed. 5 The next 6 column over is whether or not we delivered our 7 site profile review document to NIOSH and the Board. All of - the answer is we've delivered 8 them all. I believe they're all sitting on 9 10 the Board's website. Anyone who wants to go online could go and see what we have to say. 11 They're usually about 200-page reports. 12 The 13 next column in terms of status of closeout is where we are, as best I can tell, which ones 14 15 are closed out. That is where we've met, we've sat together with the Work Group 16 and resolved all the issues 17 we've to the satisfaction of those concerned. And other 18 19 areas you'll see, the items which say active. That means we currently have an active work 20 group that's meeting periodically to put to 21 bed the issues that we are dealing with. 22 And

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1 you'll also see items, and unfortunately there 2 are a number of them, that say inactive. What this means is these are site profile reviews 3 that SC&A has completed, but unfortunately it 4 really wasn't possible for a work group to 5 form and to meet, to engage the issue. So 6 there are a lot of 7 inactives. And then there's another category that Ι call SEC 8 and this is important because very 9 active, 10 often we'll do a site profile review, and then somewhere along the line an SEC petition would 11 A good example would be at the 12 be issued. 13 Pantex plant. Another good one would be the Savannah River. You know, these are places 14 15 we transitioned from doing where а site profile review. Out comes an SEC which of 16 course is of great interest to many, many 17 And we transition into the review of 18 people. 19 the SEC petition. But very often we'll complete the SEC petition review process, some 20 judgment will be made on behalf of the Board 21 regarding granting, denying a portion of or 22

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1	all of an SEC petition, but there still very
2	often are issues that are residual that we
3	call - they're not SEC issues, but they are
4	still some technical issues that need to be
5	resolved. So even though we may end up
6	closing out and resolving the SEC issues,
7	there may still be some site profile issues.
8	And I put down the number of work hours next
9	to each one of the active sites. So you get
10	an idea of what I think it's going to take to
11	finish up the work.
12	And I think that tells the story.
13	I'll go back to the first slide just so that
13 14	I'll go back to the first slide just so that you can get that bird's eye view again on
14	you can get that bird's eye view again on
14 15	you can get that bird's eye view again on where we are. Again, the bird's eye view is I
14 15 16	you can get that bird's eye view again on where we are. Again, the bird's eye view is I think we finished all our major deliverables
14 15 16 17	you can get that bird's eye view again on where we are. Again, the bird's eye view is I think we finished all our major deliverables except for one, the tenth set of cases. I
14 15 16 17 18	you can get that bird's eye view again on where we are. Again, the bird's eye view is I think we finished all our major deliverables except for one, the tenth set of cases. I believe that we are 50 percent home in terms
14 15 16 17 18 19	you can get that bird's eye view again on where we are. Again, the bird's eye view is I think we finished all our major deliverables except for one, the tenth set of cases. I believe that we are 50 percent home in terms of closing out all issues that were raised all

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the remaining issues, but still we're going to 1 2 need a little bit more resources than that to finish all of the open items. And that 3 4 concludes my presentation. I welcome any questions anyone might have. 5 6 CHAIR ZIEMER: John, can copies of this be made available for our work session on 7 Thursday? 8 DR. MAURO: Yes, and I believe that 9 10 CHAIR ZIEMER: Or do we have them 11 already? 12 13 DR. MAURO: I think they might actually have been put out on the back. 14 I was talking to Zaida. 15 She mentioned that she 16 didn't have copies. Are they on 17 CHAIR ZIEMER: the Oh I'm sorry, I didn't even look on the disk? 18 19 disk to see if it was there. Good, thank you. Dr. Melius, question? 20 MEMBER MELIUS: That was actually 21 my first question as he started to present was 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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1 trying to see where we had, because I didn't 2 want to write down all those numbers. I'm having a little trouble figuring out what to 3 make of this because I think I need an update 4 on the status of the contract award to sort of 5 know where we are. 6 And I think it also 7 affects our ability to make assignments and how we conduct the rest of this 8 sort of meeting. 9

10 CHAIR ZIEMER: Ted, give us an 11 update on that.

Yes, so the status of 12 MR. KATZ: 13 the contract is, as I think Dr. Ziemer mentioned earlier, all of the technical work 14 15 has been done for the making of an award, and 16 it is going through a sort of policy review process at CDC before the award can be made, 17 and we don't have exact timing on when that 18 19 award will be made. I would also mention that because of the situation, I believe 20 it's already been done or it's in the process of 21 being done is the SC&A contract has been or is 22

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being extended to the end of December to cover whatever the reality is in terms of the timing of that award.

CHAIR ZIEMER: Let me add to that 4 There is nonetheless money 5 though, however. for a 6 lot of closeout work, and I would 7 anticipate that if some sort of announcement isn't made, David Staudt I believe is willing 8 to continue - perhaps I shouldn't speak for 9 10 him, but he certainly indicated earlier that fact, even if there were a different 11 in contractor that closeout activities could take 12 13 place under this. MR. STAUDT: Dr. Ziemer? 14 David, are you on 15 CHAIR ZIEMER: 16 the line? MR. STAUDT: Yes sir, that's me. 17

18 CHAIR ZIEMER: Oh okay. I don't19 want to speak for you, David.

20 MR. STAUDT: Yes, two things. I 21 did want to reinforce the fact that Ted is 22 correct. We're in the final stages of getting

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1 the contract award and any delay, the slight 2 delay was based on my part alone, so I apologize to the Board. I should have had it 3 4 awarded by now, but I expect it to be done very, very shortly. But aside from that I 5 6 would recommend that we extend the current 7 SC&A contract probably through at least January based on John's comments on the level 8 of funding and the number of hours. I did 9 10 want to get his feedback on that, assuming that SC&A was or was not successful on how far 11 that would take them because I'd be more than 12 13 happy to extend the current contract to take care of that function. 14

15 DR. MAURO: David, this is John. 16 Right now the way I see it is we have Yes. 3,000 work hours about \$400,000 17 or left We're trying to make our beginning today. 18 19 best estimate right up as current as we can. We've been operating at 20 а pace of about \$300,000 a month. So that means we'll get 21 through this month and we'll probably be able 22

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1 to go through next month. So I would say 2 coming toward the end of January we will run out of money. 3 MR. STAUDT: Okay, well I'm working 4 on your modifications right now, so if you 5 6 think that's your best estimate right now we 7 can easily extend it, you know, into February if you want, but that's really kind of, you 8 know, your call right now and your best 9 10 advice. I would say we will MAURO: 11 DR. make it into January. Someplace -12 13 MR. STAUDT: Okay, well right now, take exception, I'll extend the 14 an base 15 contract and the asset task orders through January 30. 16 DR. MAURO: That would be fine. 17 Tt. would be cutting it close. Sometime toward 18 19 the end of January we will run out of money. MR. STAUDT: Okay, that's what I'll 20 for now if that's okay with everybody. 21 do 22 MELIUS: Can I just ask MEMBER **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS

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1 another question?

2 CHAIR ZIEMER: There may be others running out of money by then too. Go ahead, 3 Jim. 4 MEMBER MELIUS: What does this mean 5 in terms of assignment of new work? Because 6 7 frankly some of the new work could have a higher priority than the old work. 8 I think we're CHAIR ZIEMER: Yes. 9 going to return to that, but let me make a 10 It seems to me that, and we can 11 comment. deliberate this as we go forward in the next 12 13 couple of days. It seems to me that the Board should be doing two things at this meeting. 14 15 One is to see what closeout things have high 16 priority from the list that John presented, but we should also identify new work and have 17 that basically identified and saying as soon 18 19 as a contract is released we want this new I don't believe we're in a 20 work to start. position to assign much new tasking to - under 21 the current contract. 22

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1 MEMBER MELIUS: I agree, that's why 2 I'm trying to figure out -CHAIR ZIEMER: But I don't believe 3 that should stop us from identifying the tasks 4 that we want done so that 5 as soon I'm \_ optimistic that there will be a contractor 6 7 named before we meet again. Dr. Ziemer, I don't MR. STAUDT: 8 see any reason why this will not be awarded by 9 10 the new year. CHAIR ZIEMER: Okay, but you know 11 David, you told us last -12 13 MR. STAUDT: I know, I know, there was some other thing that came up. 14 I understand. 15 CHAIR ZIEMER: MR. STAUDT: But as of right now 16 the way it's sitting there's no reason why I 17 don't see this awarded by the new year. 18 19 CHAIR ZIEMER: Okay, but in any think we should go ahead and in 20 event Ι essence define the tasking so that it's ready 21 to go. 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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MEMBER MELIUS: Okay. I just wanted to make sure we had - we'll probably have to be a little - the scheduling may be difficult, but at least we'll have something.

The scheduling may 5 CHAIR ZIEMER: be difficult and the Work Groups may have 6 7 problems because we have a number of work groups with ongoing things that involve SC&A, 8 and to the extent that work groups need to 9 schedule meetings in the next six weeks this 10 could be problematical. So we need to do as 11 much as we can on the closeout, identify the 12 13 new items, and in a sense we would proceed as is if everything normal 14 and we have а contractor. And then we will wait for the 15 word that will come to us. 16

And John, I don't know if you want to do it now, but you also have some ideas on new work and you could share those either now or - it may be best done during the work session of the Board. John Mauro, right.

DR. MAURO: Yes, we can wait for

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the work session. That would be fine.

2 CHAIR ZIEMER: Because we're close to the 2 o'clock hour here qetting 3 4 anyway. Okay, Brad, you have a question here? MEMBER CLAWSON: I just want to 5 make sure because this is kind of hamstringing 6 7 us as work groups at a point, because we've got certain ones that we have to set out far 8 advance because of their special 9 in 10 uniqueness, and we're hamstringed on this. Yes, and I think at CHAIR ZIEMER: 11 the moment what we're going to need to do is 12 13 go ahead and schedule because announcements have to be made and the usual sort of red tape 14 15 has to be taken care of. It'll be easier to 16 cancel if we have to, and I'm hopeful that we don't, but I think we go ahead and plan as if 17 things are going to fall into place. Other 18 19 comments or questions for John right now? Okay John, thank you very much. 20 That's very helpful for us as we look forward. 21

We have on the agenda a break. I

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1	don't know if we really need one this soon
2	after lunch. We'll just pause a minute if
3	anyone needs a comfort break and we're going
4	to begin the deliberations on Savannah River
5	here right at 2 o'clock. So just going to
6	take about a 5-minute - don't go far. We'll
7	take just a 5-minute recess so everybody is
8	ready at 2 o'clock.
9	(Whereupon, the above-entitled
10	matter went off the record at 1:54 p.m. and
11	resumed at 2:00 p.m.)
12	CHAIR ZIEMER: We're ready to
13	reconvene the meeting if you'd all have your
14	seats. Thank you very much. I'd like to
15	check the phone line. Dr. Roessler, is the
16	phone line open for your hearing?
17	MEMBER ROESSLER: I'm here.
18	CHAIR ZIEMER: Very good, thank
19	you. We're going to now move to the agenda
20	item which is called Savannah River SEC
21	Petition. There are a number of individuals
22	who will be making presentations. We're going
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to begin with our Designated Federal Official, 1 2 Ted Katz, who's going to outline for us all what the SEC process is all about, give us 3 kind of an overview of that. 4 Then we will hear from Tim Taulbee representing NIOSH and 5 he will present the evaluation report on the 6 7 petition representing NIOSH's evaluation. We will then hear from a number of petitioners 8 from the Savannah River site, and then we will 9 10 also have an opportunity to hear from our board contractor, SC&A, on their review of the 11 So a number of items before us 12 petition. 13 dealing with Savannah River. So let's begin then with Mr. Katz who will give 14 us an overview of the process. 15 MR. KATZ: Thank you, Dr. Ziemer. 16

Before I do that though let me - since we're starting a session where there's quite a bit of public presentation and input, I need to let you know about a policy of the Board with respect to transcripts. I think as you've noticed this meeting is being transcribed.

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1 There will be a verbatim transcript and that transcript gets posted to the NIOSH website 2 where it's available for all to see. We have 3 a policy with respect to that which is if you 4 come up and speak you don't have to give your 5 name if you don't want to, but if you do give 6 7 your name generally speaking we will not redact your name so that will appear in the 8 You will be identified in the transcript. 9 And if you discuss for example 10 transcript. medical conditions that you have or such those 11 would generally appear in the transcript too. 12 13 If you discuss, however, a third party, another person, that information about a third 14 15 party will be removed from the transcript. Ιt 16 will be redacted. The other thing to note of importance is if you would like to speak with 17 the Board, present information to the Board 18 19 but you don't want to do it in public then me and we'll 20 contact arrange something if you're not willing to do that. Last point 21 about this is the policy that we have about 22

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redaction which I've just discussed should be available where you sign in to speak and it's also available on the NIOSH website with the agenda for this meeting. So if you want to look at that in detail.

Now, just to give you then - we 6 7 thought it'd be useful to give an overview of the SEC process, not so much for the 8 petitioners who I think probably at this point 9 10 have a pretty good idea of how that process but for other people from Savannah works, 11 River who may not be so familiar and don't 12 13 know where this, today's events come into the process and what goes forward. So I'll try to 14 be very brief about that. But it's about a 7 15 or 8 step process all in all depending on how 16 you count, but it begins all with a petition. 17 NIOSH needs a petition before the Secretary 18 19 can consider adding a class to the cohort. And a point I just want to make about the 20 petitioning process is that there can be more 21 than one petition from a site, and a site as 22

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big and with as long a history as Savannah 1 River may have in the end of the day many 2 addressing particular classes. 3 petitions 4 Right now we are considering one today, but there is I believe another petition that's 5 already been received by NIOSH and there could 6 7 be more. I'd just make that point.

The second step in the process is 8 to qualify the petition and that's just 9 in effect to say that it meets certain basic 10 requirements to get the full consideration of 11 NIOSH and the Board and the 12 Secretary of 13 Health and Human Services, the Director of NIOSH and so on. The third step is that NIOSH 14 15 evaluates the petition and prepares a report. 16 And in the case of Savannah River site it's I think the Board received that done that. 17 report a month ago or so. And the fourth step 18 19 then, which is where we are today, is the Board takes up the petition for consideration. 20 something about the Board's 21 And to sav consideration of a petition, it can be brief 22

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1 as you heard this morning in a case that's 2 very simple, and it can be very extensive in a case like with big sites and covering many 3 years that you may have with Savannah River 4 begins typically with 5 site. Ιt the presentation of a NIOSH evaluation report and 6 7 following that the petitioners are given the opportunity to speak to their petition and 8 also speak to the NIOSH evaluation report 9 10 their view of what's found in that evaluation From there then a number of things 11 report. The Board of course has a lot of 12 occur. 13 dialogue, but the Board may need to assign a work group. In this case there is already a 14 15 work group focusing on Savannah River site 16 that may continue the work beyond the Board meeting to go into details about this. 17 And you just had a presentation from SC&A. 18 They 19 may be brought into the picture as well to do a detailed technical review of issues. 20 And in this case with Savannah River site with a 21 construction petition they've already 22 done

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1 what they have termed a paper review which is 2 sort of the initial step in how they go about their work for the Board in investigating 3 issues in detail. All of this goes on until 4 the Board has come to a point where it has 5 sufficient confidence that it understands the 6 7 issues and can make a recommendation, and it makes a recommendation to the Secretary of 8 Health and Human Services as to whether or not 9 10 to add a class to the special exposure cohort. At that point then the director of NIOSH will 11 receive all this information, including - and 12 important, it's 13 not just it's very the information that the petitioners provide and 14 15 SC&A and so on, but also information that's provided by members of the public, members in 16 this case of Savannah River site who come to, 17 for example, a public comment session and may 18 19 provide information that may be important to that petition as well. The director of NIOSH 20 considers all this information and makes a 21 recommended decision as to whether the class 22

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1 should be added. That's step five. Step six 2 is the Secretary of Health and Human Services makes a final decision. And then important to 3 4 you again, step seven is if the Secretary of Health and Human Services makes a decision 5 that's adverse to adding part of the class or 6 7 the whole class, denies adding part of the class, then there's the opportunity for the 8 petitioners to appeal that decision. 9 But in 10 quick, that's the whole process and here we the first starting with Board's 11 are consideration of this petition. Thank you. 12 13 CHAIR ZIEMER: And Mr. Katz, if I might add, if the Secretary does recommend a 14 15 class be added, that recommendation goes to Congress and Congress then has, I believe, 30 16 days to either revoke that, or if they take no 17

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19 takes effect.
20 MR. KATZ: Right, and the record to
21 date is that Congress has never sought to
22 revoke any designation by the Secretary.

action then it stands as a recommendation and

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1 CHAIR ZIEMER: Okay, thank you very 2 proceed then to hear much. Let's the evaluation report from NIOSH on the Savannah 3 4 River petition. And that petition for the is Petition SEC-00103 5 record and the presentation will be given by Mr. Taulbee, Tim 6 Taulbee, and he will give details on both the 7 petitioner and the site and the recommendation 8 of NIOSH. 9 10 MR. TAULBEE: Thank you, Dr. Ziemer, and for this opportunity to present 11 River site special 12 the Savannah exposure Can everyone hear me okay? 13 cohort. Okay. And thank you members of the Board for your 14 15 attention during this evaluation. 16 To give a little bit of an overview of this petition, we received it November 11, 17 The petitioner proposed the class 2007. 18 19 definition of construction workers and all other workers in all locations at the Savannah 20 River site in Aiken, South Carolina, 21 from January 1 of 1950 to the present. On March 4 22

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1 of 2008 we qualified the petition for 2 evaluation for construction building and trades workers only. And when I indicate 3 4 building trades and construction workers you'll hear me refer to those interchangeably 5 throughout my presentation. Sometimes I'll 6 7 just refer to construction trades. What I'm talking about here are the pipefitters, the 8 laborers, the carpenters, the electricians, 9 the general trades and crafts that are used 10 for construction. Also millwrights that would 11 work as mechanics within the facilities, et 12 13 All of these are lumped together in cetera. what we call construction and building trades 14 15 workers. Federal March 10 of 2008 a 16 On

Register notice was published identifying that 17 we had qualified this petition for evaluation. 18 Because we only qualified the construction 19 and building trades workers for evaluation, 20 petitioners 21 two of the who were not construction building trades workers requested 22

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an administrative review on April 24 and April 1 2 25. And this administrative review is conducted independent group within by an 3 4 NIOSH, not part of OCAS, the group that I work in, where they look at what the petitioners 5 provided to us as far as information as to 6 7 whether we restricted the class too narrowly. The administrative review panel presented 8 their findings to the director of NIOSH on 9 10 June 25 of 2008 and the administrative review panel concluded that the petitioners did not 11 provide sufficient information to extend the 12 13 class definition beyond the Savannah River employees classified 14 site as construction 15 a result of this finding we workers. As evaluation of all 16 continued with our on construction workers - and again I'm adding 17 building trades in there - who worked in any 18 19 area at the Savannah River site during the period of January 1, 1950, through December 20 31, 2007. The initial petition if you recall 21 said through present. Unfortunately present 22

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is a moving target within our evaluation time 1 2 periods so we needed a hard date that we could look at against. In July of this year, July 3 17, we notified the Advisory Boardthat we were 4 not going to make the 180-day time period and 5 this was due to data access issues, and over 6 7 the period of April and May into the first of June we worked through the data access issues 8 with the Savannah River site and we were able 9 10 to get onsite and review the records that we needed in order to conduct this evaluation. 11 The evaluation report was issued on November 12 14 of 2008. 13 I want to talk a little bit 14 So 15 about the petition basis for this petition, 16 and the main basis came as to why we qualified this petition was due to external monitoring 17

unmonitored workers of unmonitored 18 or 19 workers, their external dose. What the petitioners provided to us that qualified this 20 petition was a study conducted by the Center 21 for the Protection of Worker Rights, or CPWR, 22

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1 in which they compared building trades workers 2 2,335 construction workers. And what they indicated in this report was that based on the 3 Health Protection Annual Radiation Exposure 4 History Database, or HPAREH as you'll hear me 5 refer to it, of radiation monitoring records 6 from the Savannah River site, it appeared that 7 the underlying dose data were deficient for 50 8 percent of the construction workers 9 to 90 10 employed at the Savannah River site. This was the information that we didn't have when we 11 had been doing our other information, and so 12 13 by the petitioners providing it to us, this qualified the petition for evaluation. 14 In 15 addition to this, the Advisory Boardsite 16 contractor SC&A in their site profile review indicated as one of the issues that Dr. Mauro 17 was talking about that no effort had been made 18 19 to evaluate the completeness of the HPAREH file used in the development of the external 20 coworker model. So these two are closely 21 related. It's using the same database. 22 So

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this is the fundamental basis that qualified
 the petition for evaluation.

For unmonitored workers also there 3 internal 4 is an dose component. The petitioners indicated that in regards to the 5 Savannah River site profile, all nuclides that 6 7 workers were potentially exposed to are not identified in the site profile. Unfortunately 8 they didn't provide any evidence of which 9 10 radionuclides for us to go and evaluate, so in and of itself this would not have qualified 11 the petition for evaluation. The Advisory 12 13 Boardcontractor had also indicated this, that the impact of internal and external exposure 14 15 to radionuclides from special campaigns are not analyzed and included in the technical 16 basis document. There are a subsequent set of 17 technical information bulletins that we use 18 19 that do discuss many of these radionuclides in the special campaigns, but what we had not 20 done to date was to go through and look at the 21 individual campaigns and see if there 22 was

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monitoring data covering that exact time campaigns period that those being were conducted. So added this into the we evaluation report and you'll see that within the report that we issue.

Some additional concerns raised by 6 7 the petitioners regarding the site profile are that radiation incidents are not included in 8 the site profile. This is really the case in 9 10 all of our site profile documents. We generally don't include these unless it was a 11 major incident at the particular facility. 12 13 However, when we look at a dose reconstruction information from the 14 and we get site, 15 information about radiological incidents we do 16 receive and when we're doing dose so а reconstruction we can incorporate information 17 incident from that into our dose 18 19 reconstructions. Another concern was that the site profile was skewed towards production 20 Again, virtually most of the site 21 workers. profiles fall along that line, that's why we 22

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1 have а separate technical information 2 OTIB-52, that addresses bulletin, and specifically construction 3 concerns and 4 building trades workers. Also, I mentioned the 1990 Tiger Team assessment. I'm not going 5 to go in that here today, but it is covered 6 7 there in our evaluation report. Another concern was that work in 8 non-radiological later found 9 areas to be 10 contaminated. They were unmonitored in these particular areas and that there was 11 some cover-up of incidents along those lines. 12 When 13 you consider the incident data, the important critical component for dose reconstruction is 14 15 that whether or not there's bioassay data 16 available as one would expect in order to allow us to estimate the internal dose. 17 We don't necessarily have to have all of the 18 19 details of the incident as long as there's some monitoring of the individual after the 20 accident or at the time of the incident so 21 that we can assess the dose. 22

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1 Some additional concerns raised by the Advisory Boardcontractor, SC&A, 2 was special tritium compounds. This is being 3 handled in a separate OTIB because it affects 4 more than just the Savannah River site and so 5 we have not addressed it within the evaluation 6 7 report. Another concern that was raised by the Advisory Boardhere was the early worker 8 monitoring data and I'll go into more detail 9 10 about that shortly. Early worker neutron monitoring, specifically this would be NTA 11 film, and then neutron to photon ratios, and 12 13 then dosimetry uncertainty. The dosimetry uncertainty is covered in the evaluation 14 15 report but in the interest of time please read 16 about that.

The sources of available information. What we started with was the site profile or the technical basis document for the Savannah River site. We also had for our team technical information bulletins and procedures on how we do dose reconstruction

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for the Savannah River site. 1 We conducted 2 interviews with current and former employees and conducted a worker outreach meeting to try 3 additional information. 4 and get The site research database in March of 2008 when we 5 qualified the petition we had about 600 6 7 technical documents in that database. This past summer in working with the Savannah River 8 site and going through their archives 9 and 10 their indexes we've captured an additional 500 documents. In reality this is many more than 11 because other than 500 just documents 12 we 13 captured individual records, radiation survey air sampling information, neutron 14 sheets, 15 surveys, et cetera. So I don't call those 16 individual documents so the volume is rather large. 17

addition, obtained In we the 18 19 quarterly dosimetry reports from the Savannah River site since 1958. This is all of the 20 quarterly monitored workers 21 are on these reports. These are all in hard copy at this 22

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We also obtained the bioassay log books 1 time. 2 since the startup of the facilities and the site special hazards investigation reports. 3 This is a detailed discussion of all of the 4 major incidents onsite, the Class 1, Class 2 5 6 incidents, as categorized by the site. We had 7 the Health Protection Annual Radiation Exposure History Database, or HPAREH. We 8 added to that the Health Protection Radiation 9 10 Exposure Database, or HPRED. This is more of the contemporary bioassay information covering 11 time periods post-1992 up until 2007. 12 We also 13 had documentation provided by the petitioners. These were all affidavits that gave us some 14 15 insight as to the monitoring that was going on 16 at the site, and we had of course the claims files within the NTOSH claims 17 case OCAS tracking system, or NOCTS. 18

Within the claims tracking system, and this is as of October 1, 2008, some of the information that Mr. Elliott provided this morning is more update for the Savannah River

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1 site, but I wanted to keep this consistent 2 with the evaluation report that is available there on the back table and that the Board has 3 4 reviewed, or has seen anyway. As of October 1 3,264 claims submitted to 5 had NIOSH. we Claims that would meet the definition, our 6 7 broad definition of building and construction trades workers, almost 1,800 of them or over 8 half would fall into that category, of 9 the 10 claims that we have received to date. For dose reconstructions we've completed 11 over 1,300 of them and of those, 1,700 that meet 12 13 the class definition, 1,400 of those claims contained some internal monitoring data. 14 In 15 other words, we have some bioassay information 16 or whole body count data on those individual dosimetry 17 workers. From external it's slightly better, we have a little bit more, 18 19 but in general it's 82 percent of all of the claims we have to date that we have received 20 from the site we have some monitoring data. 21 If you recall, the initial petition was for 22

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unmonitored workers and our ability to reconstruct their doses by using a coworker model. So in reality this method that is being - that has caused some concern, causing us to do the evaluation is affecting 18 percent of the claims.

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7 Ι want to briefly go over the Savannah River site operations. Some of the 8 Board members attended a tour yesterday so 9 10 this is a bit of a repeat, but others there in the audience might not be as familiar with the 11 The primary mission was to produce site. 12 13 materials for nuclear weapons, specifically plutonium and tritium the site. 14 at Α 15 secondary mission was to manufacture tritium 16 reservoirs to be used in nuclear weapons. Α third mission was isotope production, 17 and these were the special campaigns that the 18 19 Board had indicated needed to be reviewed and these were for the production of 20 more, sources, plutonium-238, irradiation 21 heat sources, cobalt-60, transplutonium isotopes 22

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americium, curium and californium. 1 such as 2 The final mission that I want to talk about here briefly is the research and development 3 at the Savannah River Laboratory. Within that 4 facility this is all the research development 5 6 that would go into the site production 7 operations. It has since changed with the closure of many of the site facilities to 8 it's Savannah River National 9 where now 10 Laboratory and they do other research, not with production just in connection the 11 operations. 12 At the Savannah River site there 13

are five main areas at the site. The 100 14 15 area, this would be the reactors of R, P, L, K 16 and C. This is the startup sequence of how they came online. The 200 area is the F and H 17 canyons, and include the tank farms. The 300 18 19 area is the fuel and target fabrication area. The 400 area is the heavy water production 20 the 700 is the research 21 and area and development, Savannah River Laboratory. 22 or

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So I'm going to walk a little bit 1 2 through the startup history at the site. And the reason for this is the Board had indicated 3 some concern about early monitoring data. 4 And the number of 5 when you look at workers monitored in 1952 versus the number in 1955 6 7 there's a big difference between them, and it with corresponds the startup of the 8 facilities. Construction actually began at 9 10 the site in February of 1951 and the first normal assay uranium arrived from the Fernald 11 1952. site in June of So the evaluation 12 13 period covers January 1 of 1950, but the first radioactive materials arriving onsite would 14 15 have been June of 1952. In September of 1952 16 the graphite test pilot achieved criticality. In January of 1953 full-scale operations of 17 the 300 area commenced. By December of that 18 19 year the R reactor achieved criticality, and in June of 1954 the first irradiated fuel was 20 withdrawn from the reactor. November of 1954 21 is when the isotope separation begins in the 22

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1 200 area, specifically with F canyon. So what 2 you can see here is we started with the 300 Then as you add each of the reactors 3 area. 4 you're going to have more people monitored over time until you get to November and that's 5 when they start monitoring in the 200 areas. 6 7 So this is the reason for the ramp-up of monitoring data that you see in the records. 8 December of 1954 was when the first 9 high-level waste tank was placed in service. 10 1955, the March of last reactor achieved 11 July 1955 radioisotope 12 criticality. of 13 separations begins in the H canyon. Started with F. About a year later is when H canyon 14 15 began to be operable. October 1955 is when 16 tritium was first recovered from the 200 area. In June 1956, the tritium facility 232 began 17 operation. By March 1957, the 200 F 18 19 operations were suspended for upgrade. an They upgraded the FB line to the JB line on 20 the roof, and so when you look at some of the 21 monitoring you'll see cyclic 22 neutron some

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information as to whether people are being -1 2 you know, when people are being monitored. And the reason is these operations 3 were 4 suspended for about a 2-year period. They 1959 1961 5 resumed in and in neptunium reprocessing began. 1961 also F and H canyons 6 7 began an alternating work schedule which also affects some of the monitoring data that we 8 And then 1963, 235 F switched from 9 see. neptunium to curium fabrication, and then 1964 10 the first U-233 separation with thorium begins 11 And I'll talk a lot more about there onsite. 12 13 that later. 1965 is when simultaneous operations of F and H canyon resumed. 14 So 15 we've got about a 4-year period where they were alternating, and the rest of the 16 time period they were running simultaneous. 1965 17 is THORAX separations. And many of you heard 18 19 yesterday about PUREX operations in the They also had a THORAX operation 20 canyons. where they were separating out the uranium-233 21 from irradiated thorium. The final THORAX 22

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1 campaign was completed in 1969.

So before we begin to get into the 2 feasibility of dose reconstruction, one of the 3 4 things that we feel is necessary is to look at how good is the data that we're using as the 5 6 fundamental basis for our evaluation. So from 7 internal dose data, NIOSH obtained the bioassay log books from the Savannah River 8 site this summer. There were 146 log books 9 10 from 1954 to 1992. 1992 is when the HPRED with everything being database picked up 11 Each of these log books is about 12 electronic. 13 300 pages in length and there's about 20 workers on each of the pages. 14 So you can see there's a large volume of bioassay monitoring 15 16 that was conducted there at the site and now we have this information in hard copy format. 17 Within the NOCTS database we went through and 18 19 coded all of the information the site had sent us previously. This got started back in May 20 of this year before we had any information 21 from the site, and there were over 380,000 22

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bioassay samples that we coded from within the 1 2 NOCTS database. Most of these were tritium, over 300,000 of them. So, the vast majority 3 4 of it is tritium. However, as I go through my presentation you'll see the numbers that we 5 have for some of the other radionuclides. 6 7 The data quality or the pedigree of We went through several log books and 8 it. extracted 200 original entries and we reviewed 9 10 them. Of the 200 names there within the log book, 62 of them were claimants that we had in 11 Fifty-seven of those we 12 the NOCTS database. 13 had the data that was in the log books, or greater than 92 percent. So the information 14 15 were receiving from the site that we on 16 individual claims that in dose we use reconstruction and have been since the startup 17 of the program. Three of the claims had 18 19 bioassay information in the log books that were not received from the site in the NOCTS 20 database, and two of the claims were new and 21 just hadn't received the submittal back 22 we

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from the site. So we're looking at better than 90 percent of the data we receive on a routine basis from the site in order to conduct dose reconstructions.

From the external dose data; this 5 is the issue that qualified the petition, was 6 7 the use of the HPAREH database and its validity in reconstructing coworker doses. 8 We knew there were some limitations in it when we 9 The limitation is 10 first started using it. that if you were employed onsite in 1979 11 you're included in this particular database. 12 13 If you terminated prior to 1979 and didn't come back, your data is not in this database. 14 15 So we knew there was a limitation associated with it based upon numbers between Taylor 16 which is a site document and the - comparing 17 an annual basis of the data. For most workers 18 19 we were looking at greater than 50 percent of 20 the data per year. So to change an annual dose distribution we felt the coworker model 21 was pretty robust when you've got 50 percent 22

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of the data. What changed here was that CPWR went through and said for construction workers you might only be looking at 10 percent of the data, and so that's what we wanted to evaluate to see if this might change some of our distributions with regards to construction and building trades workers.

We obtained the quarterly dosimetry 8 reports from 1958 in hard copy and we compared 9 10 the annual dose distributions between these reports to HPAREH for four years, 1960, `65, 11 `70 and `75. If you look at the number of 12 13 monitored workers in the yellow that you see there, that comes from the Taylor document as 14 15 to how many people were monitored onsite in a 16 given year. And that very early time period here - let's see if I can get this thing to 17 work. This is the ramp-up that I was talking 18 19 about earlier, and then you see that there was approximately 5 to 6,000 workers monitored on 20 the site in these early time periods. 21 When it to the data and number of you compare 22

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1 workers monitored in the HPAREH database, that's the red bars here, it follows quite 2 nicely until you get prior to 1979 and that's 3 4 where it begins to fall off, that those workers are not included in the database used 5 to develop the coworker model. It's only for 6 All other workers that 7 the coworker model. were monitored during this time period that 8 are not in HPAREH, we receive that information 9 10 when we do dose reconstruction. So we've been getting it all along from the site at early 11 It's only in the development of dose 12 doses. 13 distributions applied to unmonitored workers. through and coded the hard 14 We went copy reports, and you'll 15 quarterly see we got slightly more workers in 1960, `65 and `75. 16 this 17 So how does compare for construction and trades workers?

18 construction and building trades workers? 19 Within HPAREH in 1960 there were only 202 20 workers in the HPAREH data system. In the 21 fourth quarter summary reports when we coded 22 them there were 747. So the study conducted

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1 by CPWR in looking at, they were correct. We 2 were only looking at about 25 percent of the data based upon this particular analysis. 3 So the big question was does this affect 4 the dose distribution? 5 annual You don't. necessarily have to have all of the data in 6 7 order to develop an annual dose distribution, you just have to have enough of it such that 8 it doesn't change, it's more stable. 9 So that 10 was the next step. And one other point here I'll make is that as you increase in time and 11 get closer to that 1979 time period the fourth 12 13 quarter dosimetry reports begin to approach 50 So it's more of a problem in the 14 percent. very early years than it was as you begin to 15 approach the latter years. 16

did the 17 So how annual dose distributions compare? And this is a]] 18 19 workers there at the site. And this is from our fourth quarter summary with the 20 green bars, and the red is what is HPAREH. And what 21 you'll see is they match quite nicely. 22 For

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those not familiar with the box and whisker 1 2 plots, this is just a way of looking at the dose distributions. The lower portion of the 3 box is the 25<sup>th</sup> percentile where 25 percent of 4 the data in say the case in 1970 is greater 5 than 10 millirem of the data that we have. 6 The bar is 50<sup>th</sup> percentile, or the median, and 7 from this case it's about 55 millirem. The 8 upper tail is 75 percentile. The 9 upper whisker here is 90<sup>th</sup> percentile and the dot is 10 the 95<sup>th</sup> percentile. And what you'll see is 11 that the 95<sup>th</sup> percentile for both all of the 12 13 coded people and those in HPAREH didn't change much based upon our analysis. In fact, it 14 15 slightly decreased. So our conclusion based 16 upon the all monitored workers is that even though we weren't seeing or we weren't using 17 all of them for the development of these 18 19 distributions, it wouldn't change much if we included all of the workers from 20 this Now, this is all standpoint. workers. 21 Looking at just the construction workers, and 22

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this is where we had that 202 versus 747. 1 We 2 do see more - a larger swing here among some of the construction workers here, but HPAREH 3 4 again typically appears to be higher. The exception is 1970 where the actual monitored 5 workers that are in the hard copy records is 6 7 greater than what is in HPAREH. Now, when you think about how apply this for dose we 8 reconstruction, we would actually apply the 9 10 all-worker model for 1970 and in this case if you were to use the 95<sup>th</sup> percentile you'd be 11 looking at about a 2 rem exposure per year 12 13 that we would be assigning. And for building and construction trades workers we would take 14 15 this data and multiply by 1.4 per the OTIB-52 16 methodology. So when you take the two from this particular all-worker model multiplied by 17 the 1.4 you end up with somewhere right around 18 19 3, 2 and a half to 3 type of rem dose. If you look at the 95<sup>th</sup> percentile, when it exceeded 20 in 1970, we're still overestimating what the 21 dose would be. So even though we're looking 22

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at a limited data set, we're still overestimating what would be applied to building and construction trades workers.

4 Now, one of the concerns that we 5 had was we used the fourth quarter results within our coding. We went through and 6 7 totaled them all up. We know building and construction trades workers are more transient 8 and so they might not have been there through 9 10 the whole year, and if they were there working in the fourth quarter we would have had their 11 So we went back for 1960 and looked at 12 data. 13 the first, second and third quarter, and sure enough it illustrates that there were about 14 15 1,400 monitored construction workers onsite in 16 1960. The dose distributions continue to decrease. These 17 are annual dose distributions, and these are workers that 18 19 would only have been there for a fraction of the time, so you would expect that the dose 20 distributions would decrease. So for these 21 workers the application of the HPAREH database 22

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which is based on an annual dose, applying that factor that we, you know, that I talked about a minute ago we feel is claimantfavorable and a bounding external dose estimate for these workers.

So from the dose reconstruction 6 7 standpoint, the feasibility. Aqain, 82 percent of the claims that we have received to 8 date have monitoring data, both external and 9 10 internal. So this would apply to the 18 percent that are not monitored that we don't 11 have any data on. Some of our tools are the 12 13 site profile that I mentioned. We do have is OTIB number 1 which the 14 average high 15 exposure for a bounding coworker dose. This 16 where assign multiple radionuclide is we intakes from accidents and incidents that have 17 occurred at the site over time and we'll 18 19 assign them all to an individual worker. So instead of just a uranium intake, if 20 they worked in the 300 area they'd get a uranium, 21 plutonium, americium, large intake that 22 а

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1 would be assigned. So this is kind of a 2 bounding coworker estimate. For external coworker model there's OTIB-32 and then for 3 construction and building trades workers we 4 have OTIB-52. Now, one of the things that 5 we're currently developing is what we call the 6 7 SRS internal coworker model. This would be a best estimate case and not a bounding estimate 8 type of case. And this is where we're working 9 10 with - or looking at using the data that's in the NOCTS database and Dr. Wheaton is going to 11 this during 12 talk more about the science 13 session tomorrow. And so this is kind of how we plan on developing this database. 14 We expect it to be available in the spring of 15 this year. 16

So when we did our feasibility determination - and for those of you who might be following along, this would be Section 7 of the evaluation report - the first thing we did was look at the source term. For internal dose it's the radionuclide of concern, for

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1 external it's photons and neutrons. What we 2 looked at was the exposure location and the time period, what personal monitoring method 3 4 was being used by the site for that time period, and then the data availability. Okay, 5 we've got information about where the work was 6 7 going on and now personal monitoring data, what was the method of analysis and is this 8 These latter three here is data available. 9 10 what plays into our feasibility determination. With regard tritium doses, 11 to location and time period, the 12 exposure 13 reactor's separations and both of these are from basically the first 14 startup and 15 operations with tritium. The 1992 here actually extends out because there is 16 some additional storage of fuels at one of 17 the

reactors. So the heavy water facility, you'll see it starts up in December of 1957. It was actually running before that, but it wasn't until December that they started recycling some of the moderator coming from the reactors

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and re-purifying it. So the first tritium 1 exposure would occur in December. 2 Savannah River Laboratory basically from startup until 3 The monitoring methods 4 present. used for urinalysis, this was for tritium, prior to 5 6 1958 was an off-gassing technique and then 7 post-1958 it was via liquid scintillation. The sensitivity of both of these methods is 8 about the 9 same. In latter years liquid improved 10 scintillation even more and the As I mentioned in the sensitivity decreased. 11 NOCTS database we have a tremendous number of 12 13 tritium bioassay samples, 300,000 over In the site profile and OTIB-14 we 14 samples. 15 have methods to estimate the doses due to 16 tritium based upon detection limit and then the modeling when we have the monitoring data. 17 So overall we feel the tritium dose 18 19 reconstruction is feasible at the Savannah River site. 20 The uranium dose reconstruction. 21

22 Primary areas were the fuel and target

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1 fabrication area, the 300 area. And then 2 Savannah River Laboratory, the 700 area from 1952 forward. Then the reactors from 1953, 3 the R 4 about a month prior to startup of November 1954. 5 reactor separations, Monitoring method was a fluorometric method 6 7 for depleted and natural uranium, and they did alpha counting for the enriched uranium. In 8 our NOCTS database we have 3,700 results from 9 10 1953 to 1992. Keep in mind post 1992 we have electronic database so there's a lot more data 11 in that particular one. And then enriched 12 13 uranium, another 3,000 samples. And post 1994 we have about 800 alpha spectroscopy samples 14 15 which will give us an isotopic breakdown of 16 the uranium, the various uraniums. So overall based to the availability of this data that we 17 have we feel that uranium dose reconstruction 18 19 at the Savannah River site is feasible. plutonium dose reconstruction 20 For 21 the primary areas of exposure the were separations in the Savannah River Laboratory 22

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from November of 1954 to 2007, and the fuel and target fabrication area from 1959 to about 1985. This is where they worked with plutonium aluminum targets in order to create transplutonium isotopes.

And so this work was conducted in 6 7 the fuel and target fabrication. The 8 monitoring method, there was a separation process on the urinalysis and alpha track 9 10 counting was used prior to `64. `64 - that should not be 1981, sorry about that. Solid 11 state surface barrier detectors. And then `81 12 13 to 2000, we have alpha spectroscopy which will give us the isotopic breakdown. In the NOCTS 14 database there is, between 1954 and 15 2006, 16 there's over 10,000 plutonium bioassay sample results that we have that we can use 17 to develop an internal coworker model. So 18 we 19 feel that plutonium dose reconstruction is feasible. 20

21 Neptunium dose reconstruction.
22 This is the fuel and target fabrication area,

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1 from 1958 to 1986, and then the separations 2 in the Savannah River Laboratory from area 1961 to `86. Aqain, this was kind of an 3 depending upon 4 intermittent campaigns that were being conducted. Same as before, alpha 5 track counting, solid state surface barrier 6 7 and then alpha spectroscopy. Now, in NOCTS we only have 304 neptunium sample results from 8 1960 to 2004, so this is an order of magnitude 9 10 lower than what you've been seeing in the However, keep in mind that we do have 11 others. access now to the Savannah River log books, 12 13 where we have all of the data, and we can certainly code all of that data in order to 14 15 create a more robust model for neptunium dose reconstructions. Because the log books are 16 available, we do feel that neptunium dose 17 reconstructions is feasible. 18

Americium, curium and californium. We lump all these together, primarily due to the chemical separations methodology. There were multiple campaigns conducted. The first

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production of americium, 1 in the curium, 2 californium, you start with the plutonium-239 So in 1959 when these targets were 3 target. 4 put into the reactor, there wasn't any curium and californium. 5 americium, Ιt was being made by neutron bombardment within the 6 From 1959 to 1963, when the fuel 7 reactors. elements came out of the reactor they were 8 allowed to cool and then they were sent to the 9 10 separations area. However, the only isotope that was extracted from those fuel elements 11 was the plutonium. The americium, curium and 12 californium were still combined with all of 13 the fission products and those were shipped 14 15 off-site to the Oak Ridge National Laboratory. 16 Starting in 1963 in the 200 area, Savannah River began to do the first separations of 17 these particular radionuclides, and this was 18 19 generate higher level transplutonium to So it wasn't until 1963 that there 20 isotopes. was really a major potential for exposure to 21 these, although there was some irradiation 22

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1 activities going on prior to that. There's 2 also the research and hot cell work in the Savannah River Laboratory. It started again 3 4 in 1963. We did have an end date here, but what we found out is that the end date is 5 before the bioassay sampling that we have, so 6 7 there might be an operation there that we were not aware of yet. But they were still doing 8 sampling beyond that time period. 9 For personal monitoring, prior to 10

`63 as I indicated, there's minimal potential 11 for exposure. `63 to `71 it was alpha track 12 13 counting, and then surface barrier detectors. They did some radiochemical separations of 14 15 each of these in the 1990s, and then they 16 started doing alpha spectroscopy. The data available in NOCTS is there's about a thousand 17 total results for these particular 18 19 radionuclides, and again I want to emphasize that we have the log books so that we 20 can supplement this. This data is just what we 21 have already coded in an electronic format. 22

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There's many more samples in the log books that would have to be coded. Based upon the availability of the information we do feel that americium, curium and californium dose reconstructions are feasible.

Thorium dose reconstruction. When 6 7 we started this particular evaluation report, we were looking at these special campaigns, 8 and campaigns generally are more of a short-9 10 term type of an operation and don't extend over many years. What we found though, is 11 that thorium work at the Savannah River site 12 13 was of major greater magnitude than what we had anticipated as far as with what you all 14 15 had done out there at the site. And so this 16 is really expanded from beyond what we had initially anticipated. From August 1954 to 17 1959 there was thorium metal canning in the 18 19 300 area. This is all part of the uranium-233 production campaigns, is what this is from. 20 When I say most of the canning was conducted 21 at Sylvania, to give an example, it will be 22

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200 slugs canned within the 300 area, 1 and 2 2,000 at Sylvania. So it was about an order of magnitude larger, but there was significant 3 canning operations going on within the 300 4 area during this time period. There was also 5 metallography work being conducted in the 700 6 7 area with regards to thorium. All of the thorium from 1954 to 1959, after it 8 was irradiated, when it came out of the reactors, 9 10 was sent to the Oak Ridge National Laboratory, or Oak Ridge site at that time. Starting in 11 1961 to 1969, the U-233 production campaigns 12 13 changed. Instead of sending it offsite for separation, the separations were conducted on 14 the Savannah River site in the 200 area. 15 This 16 is the THORAX process that I mentioned a few In 1964, there was canning of 17 minutes ago. thorium, which was in a powder form and there 18 19 was compaction going on. So again, here you have a potential for airborne contamination. 20 personal monitoring methods 21 The 1960, all that was available was prior to 22

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urinalysis. For members of the Board who had 1 been working with the thorium issues, as you 2 know the urinalysis has a very low sensitivity 3 for thorium, and doing dose reconstructions is 4 quite difficult in using this data. Post 1960 5 through 1969 of thorium operations, there was 6 7 whole body counting and chest counting. Whole body and chest counting actually extends all 8 the way out to modern time periods, but just 9 10 for the thorium within this time period. As far availability, data there's 224 11 as urinalysis for 168 workers from 1955 to 1956. 12 13 We also have whole body and chest counting This data we just captured here on the 14 data. 15 Savannah River site last week. We had a team down here trying to address this particular 16 And so as a result of the ongoing 17 issue. investigations we're doing, we're reserving 18 19 thorium dose reconstruction at this time for prior to 1960. This is during the urinalysis 20 Post 1960 there is whole body count 21 time. We have captured the in vivo counts for 22 data.

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1 these 168 workers, and we don't know what 2 fraction of them yet we have data on. So that's an ongoing analysis. We expect to have 3 a decision by March of 2009. However, we do 4 feel whole 5 due to the body counting methodology and chest counting post 1960 we 6 7 can do dose reconstruction. And the reason for this is when you look at the whole body 8 section of each of the 9 counting monthly 10 reports, they'll indicate that there will be 30-some odd people counted in the whole body 11 counter and about a third of them, 10 or 11, 12 13 were counted specifically for thorium. And that is indicated there within those reports. 14 Fission product and induced 15 activity dose reconstruction. Again, the 16 reactor separation Savannah River Laboratory 17 much from startup 18 pretty to present. 19 Monitoring method was a direct plating of the urinalysis data, and then there was whole body 20 counting data. Within NOCTS we have over 21 4,700 sample results from 1954 to 2004, so we 22

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do feel that fission and activation product dose reconstruction is feasible.

Kind of in summary here, this is 3 probably hard to read for people there in the 4 back, but what we have here is the major 5 isotope that I just went through, and then the 6 7 bioassay underneath it. And what you see is that in general in these areas the bioassay 8 methodology covers these specific campaigns. 9 It appears as if this americium, curium and 10 californium is not covered, but as I indicated 11 those irradiated materials were sent offsite. 12 13 The first separations started in 1963, which corresponds with the bioassay conducted 14 15 The exception here is this thorium onsite. out here in this early time period, and this 16 we're continuing to evaluate here 17 is what onsite. 18

Photon dose reconstruction. This would be for all of the areas, fuel and target fabrication, basically again since startup. The personal monitoring method from `51 to

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1970 was film badges. And from our review of 1 2 the procedures and documentation, all workers entering radiologically controlled areas were 3 4 required to wear a film badge dosimeter. 5 There are some exceptions to that, and let me talk briefly about those. One exception was 6 7 detailed in DPSOX-254, and that was from November of 1953 through July of 1955. This 8 exception was written in due to the startup of 9 the facilities. All of the film badges were 10 the gatehouses, and some of the issued at 11 had not been built yet, 12 qatehouses and so 13 there wasn't a way to issue them to workers coming in. The requirement on the monitoring 14 15 was only natural assay uranium could be worked 16 with in the area. Otherwise, if they were working with anything else, they had to badge 17 everybody coming in. This continued on, this 18 19 exception rule, until July of 1955 when all of construction operations 20 the were complete. some other exceptions 21 There are that were pointed during the worker outreach 22 to us

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1 meeting. Sometimes workers would go into an 2 area and the day before it was posted as a radiation area, and the day that they went in 3 4 it was not posted as a radiation area anymore. And what happened, as we found within the 5 radiation surveys, is that the Savannah River 6 7 site would set up an exclusion zone around so the construction trades workers could come in 8 and do their work. Around the perimeter from 9 10 these radiation survey reports, we have dosimeter readings where the site would 11 all position dosimeters around the work 12 13 environment monitor, to to ensure the radiation doses were less than the 100 mrem 14 15 per year requirement at the time. So although there are these exceptions that did occur over 16 time, based upon our review of information 17 this summer, we don't find any scenarios where 18 19 there weren't any monitored data, or there wasn't monitoring going on in areas that there 20 should have been. 21

Thermal luminescent dosimeters were

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1 used from 1970 to the present. For data 2 availability, as I indicated, we have all of the quarterly dosimetry reports. 3 We've 4 compared those to HPAREH. We've shown that this HPAREH is claimant-favorable. Therefore, 5 the use of HPAREH for OTIB-32 for unmonitored 6 7 workers, we feel is a bounding estimate. For construction trades workers we multiply by an 8 additional 1.4. Based upon all of this, we 9 10 feel that photon dose reconstruction at Savannah River is feasible. 11 Neutron dose reconstruction. The 12 13 exposure location time periods, the fuel and fabrications, the 14 target reactors, 15 separations, and then the 700 area. Aqain, 16 the fuel and target fabrications is due to the plutonium aluminum targets that were being 17 made there. Personal monitoring method -- and 18 19 this is something that's a little different from some of the other sites that we have 20 worked at, in that Savannah River only 21 required monitoring in areas where the neutron 22

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1 dose rate exceeded 1 mrem per hour. They did 2 this monitoring by issuing NTA badges from `54 to 1970, and then thermal luminescent neutron 3 dosimeters from 1970 to 2007. 4 We know with NTA film there's an energy response limitation 5 associated with it. However, the 6 at 7 changeover from NTA film to the thermal luminescent dosimeters, the Savannah 8 River site conducted some special studies in which 9 10 they - in the workplace, in the plutonium They positioned the Bonner Sphere facilities. 11 as well as the thermal luminescent dosimeter 12 13 and the NTA film. So we have the comparison of how much the NTA film under-responded, and 14 15 it was by about a factor of 3.9. So with this 16 under-response for the NTA film, there needs to be a correction factor applied to it-- to 17 the NTA data in order to use that for dose 18 19 reconstruction.

As far as data availability, we have neutron survey data, and these are on the Radiation Survey Log Sheets, or the RSLSs.

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1 They're at the site. These are both fast and 2 slow neutron measurements, and the very first one that we have is in January of 1954, about 3 two weeks after the R reactor started up. 4 We some of 5 have these measurements. NTA monitoring from 1954 to 1970. Even though the 6 7 requirement of 1 mrem per hour was there. Prior to 1962, there's actually limited NTA 8 monitoring or limited neutron monitoring among 9 10 the workforce. Post 1962 to 1970, there's much more routine. We see hundreds of samples 11 within the H area and F area. 12

13 So from feasibility and validity of the neutron to photon ratio, what is currently 14 15 in the site profile that we use is the data based upon the thermal luminescent data post 16 1970 and we extrapolate back in time. We felt 17 with - at this time we don't have any evidence 18 19 that the current NP ratio is not valid. We compared some of these early measurements that 20 we see on these radiation surveys. They show 21 about 10 percent around the reactor areas. 22

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1 This is the value. I think it's 13 percent in 2 the site profile. However, qiven the additional data--3 and know the now we correction factor for the NTA-- we do feel 4 that we can validate and evaluate this earlier 5 time period instead of extrapolating as 6 we 7 have been doing. What we propose to do is use the pre-1962 radiation survey data, because in 8 monitoring time period 9 that the NTA was 10 limited. And this is the same method that we have applied to the single pass reactors at 11 Hanford and we issued a report a couple of 12 13 months ago about that. In 1962 to 1970, we feel we can 14 use the NTA badges, energy-15 corrected, multiplying by this factor of 3.9 16 and compare that with the photon data and then do our comparison there on the NP 17 ratio. Based upon this information, we do feel that 18 19 neutron dose reconstruction at the Savannah River site is feasible. 20 I want to talk briefly now about 21 radiation monitoring program 22 the that was **NEAL R. GROSS** 

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1 being conducted at the site, and this is from 2 1956 to 1960. These were some numbers that we had readily available. One of the things that 3 I hope to illustrate here is that even though 4 the data that we have is more of a sampling at 5 this point, there is large volumes of data 6 that we have identified that we can go to 7 pretty much validate any of the values within 8 the site profile. Savannah River site was 9 10 monitoring about 6,000 workers per year during this time period. There were between 8,000 to 11 9,000 workers onsite. This is post the major 12 13 buildup of construction. During that time 30,000 to 40,000 people 14 period there was 15 onsite prior 1955, but to once the 16 construction operations finished or were finishing up, the number of actual workers 17 onsite decreased significantly. 18 19 Internal monitoring. Non-tritium

19 Internal monitoring. Non-tritium 20 analysis. These would be uranium, plutonium, 21 during this time period. You're looking at 22 greater than 8,000 samples per year. This is

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1 the information that's in these log books that You add in the tritium 2 we have obtained. analysis, and you're looking at an additional 3 4 20,000 samples per Workplace year. radiological 5 monitoring. These the are surveys that I was talking about. There's 6 7 over 140,000 of them per year. These are in records boxes in the Federal Records Center. 8 Savannah River site retrieved a number of 9 10 these boxes for us. I think we had them pull about 50 boxes back this summer. 11 We went through them to see what kind of condition, 12 13 whether they are usable and what information In addition, there's the air 14 was on them. 15 samples that were being conducted throughout 16 the site, where you have over 80,000 air samples conducted per year. And again, this 17 time period is 1956 to 1960. These records 18 19 are available for 1960 all the way up and through 2007, if we want to go and get them 20 and detail them from that standpoint. 21 But I just want to give a feel for-- there is a very 22

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large radiological monitoring program being conducted at the site during these time periods. So we feel our evaluation at the Savannah River site was monitoring workers who were exposed to radiation is a pretty good assumption, or a conclusion based upon this large-scale monitoring.

Normally during one of these--8 during an SEC evaluation we will present dose 9 10 reconstructions to the Advisory Boardof how we do dose reconstruction. The advisory board--11 you all have already reviewed a number of the 12 13 Savannah River cases, the first 100 that Dr. Mauro was talking about earlier that all of 14 the issues have been closed out. 15 Nineteen of 16 them were Savannah River cases, 14 were from personnel, five 17 operations were from construction trades workers, and the findings 18 19 of these first 100 reviews have effectively Now, dose reconstructions been closed out. 20 for some of the best estimate in a category we 21 called "Unmonitored but should have 22 been

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monitored workers" have yet to be completed, because we haven't completed this internal coworker model. Once we complete this, then we'll certainly present to the Board, if you desire, how we do dose reconstruction with this new coworker model.

In conclusion here, the evaluation 7 been evaluated. report has NIOSH has 8 evaluated the petition using the guidelines of 9 10 42 CFR 83.13 and we submit to you all the summary of findings in the petition 11 our evaluation report to the Advisory Boardand to 12 13 the petitioners. We issued this report on November 14. The evaluation process is a two-14 15 pronged test. First, we evaluate whether it 16 is feasible to estimate the level of radiation dose to individual members of the class with 17 sufficient accuracy, and two, is there 18 а 19 reasonable likelihood that such radiation endangered 20 doses may have the health of members of the class. NIOSH has found that 21 the available monitoring records, process 22

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1	descriptions and source term data are adequate
2	to complete dose reconstructions with
3	sufficient accuracy for the evaluated class of
4	employees. The exception at this point in
5	time is pre-1960 thorium exposures at the
6	Savannah River site primarily in the 300 and
7	700 areas. This is still reserved, and we
8	will be doing further follow-up and report
9	back to you all. The health endangerment
10	determination is not required, because we feel
11	we can do dose reconstruction at this time.
12	In summary - this is the table that
12 13	In summary - this is the table that you're all used to seeing - for tritium,
13	you're all used to seeing - for tritium,
13 14	you're all used to seeing - for tritium, uranium, plutonium, americium, curium,
13 14 15	you're all used to seeing - for tritium, uranium, plutonium, americium, curium, californium, neptunium we all feel that we can
13 14 15 16	you're all used to seeing - for tritium, uranium, plutonium, americium, curium, californium, neptunium we all feel that we can do dose reconstruction. The thorium in this
13 14 15 16 17	you're all used to seeing - for tritium, uranium, plutonium, americium, curium, californium, neptunium we all feel that we can do dose reconstruction. The thorium in this earlier time period is reserved. We're not
13 14 15 16 17 18	you're all used to seeing - for tritium, uranium, plutonium, americium, curium, californium, neptunium we all feel that we can do dose reconstruction. The thorium in this earlier time period is reserved. We're not sure yet whether we can actually bound the
13 14 15 16 17 18 19	you're all used to seeing - for tritium, uranium, plutonium, americium, curium, californium, neptunium we all feel that we can do dose reconstruction. The thorium in this earlier time period is reserved. We're not sure yet whether we can actually bound the doses. Thorium post-1960, we feel we can

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reconstruction is feasible. For external dose, the photon and gamma, beta and neutrons and occupational medical X-rays we do feel are feasible. And with that I'll be happy to answer any questions that people may have.

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6 CHAIR ZIEMER: Okay, thank you. 7 Thank you very much, Tim. Board members, do 8 you have questions right now for Tim? John 9 Poston.

10 MEMBER POSTON: Tim, thanks for your detailed presentation. I noticed that in 11 your discussion of neutron dose you gave some 12 disadvantages or some weaknesses in the NTA 13 film, and it appears that you've tied it to 14 15 the TNLD data, but you didn't mention any weaknesses in that system, and I wondered how 16 you took that into account, because that's not 17 a perfect system. 18 19 MR. TAULBEE: No, it's not, however

21 MEMBER POSTON: And further, the 22 fields at Savannah River are so different,

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1 depending on where you go, that it's a 2 difficult system to calibrate and to use 3 properly.

One of the 4 MR. TAULBEE: Yes. things that we did compare with the TLND data 5 for the report that we are looking at at the 6 7 plutonium facility. They also had Bonner Sphere, hand survey measurements as well as 8 the TLND. Those two results matched quite 9 10 closely within about 10 to 15 percent of each other, whereas the NTA was under-responding by 11 almost a factor of four. 12

13 CHAIR ZIEMER: Additional questions14 at this time, board members?

15AUDIENCE MEMBER:I have a16question.I have been to several meetings -

17 CHAIR ZIEMER: Well, if you would 18 hold off till the comment period. You'll have 19 an opportunity. This right now is just the 20 Board members. Okay. Mark?

21 MEMBER GRIFFON: Tim, can you - I'm 22 just trying to clarify. I'm listening to the

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1 presentation and throughout the thing it 2 seemed to me in the evaluation report too the entire focus is operational on data and 3 4 operations exposures, and then at the very 5 last paragraph you seem to conclude that therefore we can bound construction worker 6 I didn't hear much mention of what the 7 doses. construction workforce did at Savannah River 8 specifically, 9 and the other part of mγ 10 question is why was the production clause in this excluded in this SEC evaluation report. 11 In other words, the original petition called 12 13 for all workers, and I think you separated it out just to focus on construction workers. 14

MR. TAULBEE: Okay. Those are two 15 questions there, thank you. To address the 16 first one, as far as our focus especially on 17 the internal of the monitoring data of the 18 19 production workers, our goal was to evaluate whether it was feasible to reconstruct doses 20 for those workers and then apply OTIB-52, 21 which has the transference from production to 22

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1 construction workers here onsite. We can, 2 from the log book data that we have, go back and identify individual construction workers 3 that were monitored within those areas. 4 We can identify them. Within the NOCTS data 5 system, you know, if you looked at our initial 6 7 component of what we were looking at, over half of the claims would meet the construction 8 worker definition. So by us looking at the 9 10 NOCTS data we're actually incorporating construction worker doses from using that 11 bioassay data that would meet that class. 12 13 On the second issue with regards to

whether the - I'm sorry, could you repeat 14 Repeat your question? Oh, 15 that? why we excluded. Okay. And the primary reason was 16 that in order to for a petition to qualify, 17 petitioners have to provide some evidence that 18 19 dose that cannot do dose а we reconstruction, and so what was presented from 20 petitioners that supported 21 the the qualification process was the CPWR study. 22 In

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the other cases there wasn't any evidence that was provided to us that would indicate that we could not. Does that answer your question?

4 MEMBER GRIFFON: I quess. I mean sort of, although it seems like any areas that 5 we left for further research, neutrons, 6 7 thorium, it would seem that those I think if self-identify those areas beyond not the 8 petition we've always in the past, you know -9 10 NOCTS had the liberty to add that in or include that, even if it's not specified in 11 the petition. 12

13 MR. TAULBEE: Right, and we will in this particular case. If we determine that 14 15 thorium doses cannot be reconstructed, then we would expand the class basically for all 16 production and construction trades in the area 17 where the thorium was worked on. You're 18 19 absolutely right, we would do that.

20 CHAIR ZIEMER: Board members, 21 additional questions? Then we want to hear 22 from the petitioners next, and I have a list

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1 of four individuals. Who is going to speak 2 first for the petitioners? Okay, gentlemen, here. And if you would for our court reporter 3 when you give your name also spell it for him. 4 Thank 5 MR. ROWE: you. Good afternoon. My name is Henry Gordon Rowe. I'm 6 7 a petitioner on the Savannah River special cohort petition. I want to thank you all for 8 the opportunity to address this board this 9 10 afternoon. I am an electrician by trade. 11 Ι first worked at SRS in 1952. I worked on and 12 13 off at Savannah River plant for 17 years, I retired in until 1995. The evaluation 14 report that just was presented to - about the 15 SRS petition that was presented to this board 16 is very disappointing to me and to all the 17 workers, the other workers that worked at SRS. 18 19 We have had only a short time to study this evaluation report, but much of it does not 20 make sense to me based on my actual experience 21 as a worker at Savannah River. I was also 22

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very disappointed with the information I heard on the tour of SRS yesterday. Quite frankly, there were a lot of lies told about construction workers. The tour presented this board with a pretty picture of SRS, but I worked there. I know, and it was just not that way.

Mr. Tim Taulbee briefed us on this 8 report about a week ago, but he did not like 9 10 to be challenged about it, so we did not get good answers from him. He did say, though, 11 that NIOSH assumed that if a worker did not 12 13 work in a radiation area, the worker could not have had any exposure and therefore did not 14 15 need to be monitored. That's a joke, and it 16 example of how NIOSH has ignored is one everything that the workers have told them. 17 We have helped organize NIOSH meetings for the 18 19 past 10 years. Ι personally have been and there's been lots of stories 20 involved, given. I remember one story that was reported 21 by a construction worker in the May 2008 focus 22

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1 group for NIOSH. He told about a group of 2 construction workers and a group that was not dressed out, a group of production workers 3 that was fully dressed out. 4 There was a rope individuals. 5 separating the two groups of There were jokes told and everything, and we 6 7 were told that the rope is where separated the contaminated area from the clean area. That 8 rope had to be a magic rope to stop 9 the 10 radiation. One little thin rope don't stop radiation. 11

One of the things that NIOSH has 12 13 been told was about missing records and log books being stolen, wearing monitors that have 14 15 someone else's ID on it, a number of them, 16 monitors that went off consistently but had else's number, and they went 17 someone off consistently, and it was explained by "there 18 19 was a power surge, " or "you must have bumped it, " or "they just weren't working properly." 20 these devices weren't working properly, 21 Ιf if how SRS NIOSH know how 22 can and much

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contamination these workers received? 1 In 2 1989, after DuPont and the subcontractors left the site and Bechtel and Westinghouse took 3 4 over, there were six crews of laborers that 10 weeks shredding 5 spent about documents, records, time cards, log books, monitoring 6 7 records, everything. I saw this with my own two eyes. I know this happened, and SRS can 8 say it didn't happen, but I saw it. 9 The law 10 says that if records were destroyed or missing, the SEC petition should be applied. 11 It all came down to numbers. The construction 12 13 workers shared that if the site or project would register or read three, they would 14 15 rotate people in and out every few minutes, 16 few hours, depending on the situation, to keep the monitoring records low so that they would 17 not have to report to Wilmington of the 18 19 findings and explain what had happened. It's 20 apparent that these supervisors or ΗP technicians, they knew the rules, they knew 21 the regulations, but they knew how to adjust 22

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1 things to keep the records clean. Records that 2 NIOSH seems eager to accept today because it will help them make sense in what they're 3 4 doing. They say this is a science they are I know it, and I feel 5 doing. That's wrong. that you all know it too. NIOSH believes that 6 7 the records, even though they are incomplete and unreadable -- because there is nothing else 8 What about what the workers have said 9 to use. 10 over the years? At this time-- at the time that NIOSH had a workshop in Cincinnati-- I 11 attended the workshop because I was on this 12 13 petition -- NIOSH stated that DOE at Savannah River site had finally agreed to send records 14 But they said that -- NIOSH said 15 to them. 16 that the records were not complete. But this report says that they had -- that NIOSH had 17 all the records that they needed. I find that 18 19 inconsistent. This evaluation report on Page 29 is evidence 20 says that there no of documentation of any incidents that would have 21 resulted in very high exposures. 22 Of course

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there's no evidence. SRS wanted it kept that way for their records, for their safety procedures so to speak. And NIOSH has not been listening to all the incidents that they have been told over the years. They have chosen not to consider any of these things.

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7 On Page 18, the report says that R reactor started in 1963 and shut down in 1964 8 tritium when demand for plutonium 9 and 10 decreased. That is not true. R reactor was shut down because of a meltdown. There was 11 also a meltdown of one of the fuel rods in K 12 13 reactor also. On Page 26 of this report, NIOSH talks about the Navy fuels manufacturing 14 15 facility operating from 1985 through 1989. That is also. Navy fuels 16 wrong never 17 operated, never made any Navy fuel. It malfunctioned on the initial startup. The 18 19 entire building was crapped up and all the workers in the building. 20 Since then, many of the workers that was working in Navy fuels at 21 the time have died of cancer. The report says 22

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1 that closure of this facility is currently 2 underway. That is also wrong. The building was completely tore down a few years ago, and 3 there's nothing left there now. 4 There is a parking lot where the building stood, so this 5 is Ιt is not currently under 6 wrong. 7 demolition. You members on that tour yesterday, there was no mention of any of 8 these buildings that was tore down. 9 There was 10 concrete slabs that we saw on lots of places, where all of these hazardous buildings have 11 since been decommissioned, decontaminated and 12 13 tore down, but that is not - nothing about that is in this report. 14

What about the affidavits that were 15 16 submitted with this petition? If you haven't them-- if you members of the Board 17 seen haven't seen the affidavits, I would encourage 18 19 you to get them and read them. A security to the entire site and 20 worker had access spasmodically wore a badge. He worked at SRS 21 for nine years. He was a nonsmoker, he had no 22

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1 family history of cancer, but he died at the 2 age of 30 to lung cancer. His claim has been denied because his dose wasn't 50 percent. 3 But I might note that it has recently been 4 sent back to NIOSH for rework. 5 There was another worker that sent in an affidavit, told 6 7 about working in 221 H Building Room 410 When personnel opened the doors, the South. 8 barn doors as they were called, it resulted in 9 10 plutonium spreading airborne from the glove boxes in 410 North where the workers had to 11 work in fully respirated, fully closed out, 12 13 fully suited out areas. This contamination spread into 410 South where workers did not 14 15 operate in this area. They were not dressed out. There was a HP man came running in and 16 told them to get the hell out, that the area 17 had gotten crapped up. The workers that were 18 19 in there, they were given a nasal smear by the HP personnel, but there was no incident ever 20 made of this report. The HP21 personnel, [Identifying Information], insisted that he 22

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1 make а report, that he log this, but his 2 supervisor was very adamant about not entering these events in the log book because it would 3 look bad on his shift. Vern's log book was -4 he entered it anyway because his conscience 5 dictated that he enter the accident report. 6 But later doing his - he was away from the 7 plant on military leave, National Guard duty, 8 his log book was taken out of his desk and 9 10 became missing.

Another worker told about working 11 on the H platform. She stated that she worked 12 13 repeatedly in the area without a dosimeter That was the case for other workers as 14 badge. 15 well. She explained since there were several 16 different occasions when the TLD badges had placed on a board in front of the area by the 17 guard gate, would be gone the following day 18 19 when they came in. They were told that a radioactive tanker truck delivering materials 20 had leaked materials on the road. The truck 21 was carrying radioactive materials and they 22

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1 leaked on the road, so therefore it wiped out 2 all the badges and they would get new badges, to go on and go to work. Some of them didn't 3 get badges until late that afternoon, some of 4 them got badges the next day. But from the 5 evaluation report that NIOSH has given, these 6 7 missing records or all of this stuff don't 8 matter.

Another worker told of his work 9 10 from 1961 to 1964 as a operator in C reactor excuse me, he was a C operator in 221 F and 11 Buildings. of his 12 221 Η Most work was They were told 13 decontamination or cleaning. that what chemicals were involved at all was 14 15 marked high radiation. While cleaning and 16 repairing the huge mess he inhaled chemicals while repairing and adjusting them. 17 One incident occurred when while removing plastic 18 19 covers from a hot railroad car and a lot of spill water on the plastic cupboard completely 20 wet his work clothes. He stated that most of 21 jobs were done without health physics 22 his

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1 personnel around or supervision, and there was 2 no records recorded of lots of incidents. The workers used to working weekend were on 3 Saturday and Sunday without any monitoring 4 badges any monitoring equipment because they 5 were not available. But he stated that the 6 7 work continued as usual even though they weren't monitored. 8

Another worker stated that 9 he 10 worked with crossties on the railroad and going between the areas on Savannah River 11 He worked from 1987 to 1995. In 1995 12 site. 13 when crossties in the crosstie pit in F area were found to be contaminated, the cross ties 14 15 on the mainline were contaminated all, and then after they found the contamination in F 16 pit the workers would have to dress out to 17 remove the contaminated crossties on the 18 19 railroad.

There is a lot of stuff that NIOSH says that they got - that NIOSH says that means that the workers got a high dose

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1 recorded when they experienced that that's 2 claimant-favorable. They would say it's just another indication that the monitoring record 3 lacked integrity and cannot be tested. 4 That's what workers testified to. 5 There was а contractor Electric Motor Service, 6 а 7 subcontractor that came in in 1990. Their job was to cut down the bubble towers in 400 area. 8 They were told that all they had to do was 9 10 cut down the bubble towers, load it on railroad cars, cut it up, load it up, get in 11 and get out. There was no HP monitoring, 12 13 there was no HP on the area, there was no protective clothing, nothing. And there was -14 15 since some of these workers have infected Now, we found out that Electric Motor 16 cancer. Service paid no income taxes, they paid no 17 Social Security for these workers that worked 18 19 on this mission. It was a short period of 20 time, probably about a month I would say, somewhere around a month they worked on the 21 And there is no record of Electric Motor iob. 22

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Service ever being onsite. This is some of
 the instances and things that went on at
 Savannah River site.

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There are hundreds of stories that 4 has been told like this. There's no point in 5 telling them over and over again. NIOSH says 6 7 that their science seems to trump anything that the workers told them, anything that we 8 the construction workers have said that we 9 10 knew about. We might only be construction workers, but we know what we saw, we know what 11 we experienced. 12

13 Another thing. NIOSH says on Page 35 that they were able to get complete lists 14 of all construction workers for 1960. 15 I find hard that to believe considering 16 subcontractors were in and out of that site on 17 an everyday basis. SRS didn't keep records of 18 19 that. So how did SRS come up with all the that NIOSH needed to do the dose 20 records There was one situation where reconstruction? 21 laborers had filled a water can from a barrel 22

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1 used to catch leaking water from а heat 2 exchanger on -20 level in one of the 100 The water was then used to spray the 3 areas. 4 drilling area to lessen the dust generated. barrel had not 5 Since the been roped up, 6 everyone was contaminated when they used the 7 water coming from this barrel. Τn а supposedly clean area in 221 H a worker was 8 working and he was found to be contaminated. 9 10 His shoes and pants were taken, but it was supposed to be a clean area. Another worker 11 in an office in F area at the 717 building 12 13 where they had a problem with the dosimeters and film badges left in the racks. The 14 15 monitors would be set at zero at the end of 16 the shift and the next morning they would have a reading of 50 or more due to the night shift 17 work alone, work being done in the building 18 19 that involved X-rays. Someone should explain NIOSH will say that that means 20 that. the workers got a higher dose recorded than they 21 really experienced, and that is claimant-22

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favorable. I would say it's just another indication that the monitoring program lacked integrity and cannot be trusted.

4 I appreciate your time today, and the time that you put on this board to keep 5 NIOSH and dose reconstruction straight, but 6 7 let's cut the bull. Dose reconstruction for construction workers regardless of what the 8 TIB-52 says is still just a guess, and it's 9 10 not even an educated guess. Our federal government has spent too much money on this 11 NIOSH should be ashamed of NIOSH boondoggle. 12 13 what they're doing. And one last thing. NIOSH and DOE will have more meetings than any 14 15 other one I know. For NIOSH to be spending 16 hundreds of thousands of dollars going around the country telling workers about 17 the SEC process and leading them on to file petitions 18 19 is a sham. For DOL to have meetings and not include NIOSH and other workers 20 groups in I don't understand how the government 21 them. has all the money that is being wasted. 22

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1	Workers have shared stories and
2	they speak clearly to the fact that workers
3	safety was not taken seriously on this site,
4	at least when it came to the construction
5	trades workers. The attitude of the site was
6	if you can do it safely, do it, but if you
7	can't, do it anyway. That's how it was
8	operated. I think that all the construction
9	workers in attendance today should speak their
10	mind, should tell their stories. There's
11	going to be a public comment time starting at
12	5 o'clock today that you can all tell what you
13	experienced at Savannah River site. I want to
14	thank the Board for listening to me. I hope
15	you will consider the things that I have said.
16	I would like for you to use them in your
17	evaluation. I have an advisor, that if it's
18	all right I would like to speak now. Mr. Don
19	Elisburg, an advisor of mine would like to say
20	something.
21	CHAIR ZIEMER: Thank you very much,
22	Mr. Rowe, and we'd certainly be pleased to

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hear from Mr. Elisburg. Don, welcome.

2 MR. ELISBURG: Good afternoon. My name's Don Elisburg. I am a consultant to the 3 building and construction trades department of 4 the AFL-CIO. I have over 46 years experience 5 in administrative procedures in occupational 6 7 safety and health and workers compensation, including having served as Assistant Secretary 8 of Labor for the Labor Standards 9 10 Administration, Employment Standards Administration where the EEOIC is housed back 11 in 1977. I've also been involved with issues 12 13 surrounding worker health and safety at the DOE since approximately 1986 when 14 Ι was Director of the Occupational Health Foundation 15 and we began to see large numbers of workers 16 with occupational illnesses due to exposure to 17 radiation and toxics at the nuclear weapons 18 19 facilities. As a matter of fact, I feel that Chairman Ziemer and I are the last 20 living graduates from having been involved in this 21 many decades Ι also 22 for so now. was а

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1 consultant to the National Academy of Public 2 Administration during its study of the DOE safety and health programs 10 years ago. 3 Ι 4 а consultant to the Environmental was Management Advisory Board at DOE with respect 5 to worker safety and health issues for several 6 7 years during which the EMAB was developing what is now the integrated safety management 8 And I was a member 9 systems programs at DOE. 10 of the Department of Energy's EEOIPCA advisory committee appointed under this initial 11 12 I am an attorney by training and statute. 13 work experience. Т do not represent individual claimants under this program. 14 15 The building trades departments has

been very reluctant to pursue SEC petitions. 16 Despite the department's objections 17 to the approach NIOSH proposed take when it. 18 to 19 established its dose reconstruction program, the building trades department stated it would 20 give NIOSH the benefit of the doubt. 21 Over time this doubt about NIOSH's ability to 22

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1 achieve a fair result has grown steadily. As 2 we and my colleagues have testified before this board in the past regarding NIOSH's 3 4 unwillingness to change course and its administrative resistance to provide effective 5 responses to our request. We're now faced 6 7 with the situation where one arm of OCAS as said it can do Gordon pointed out dose 8 reconstructions wherever and whenever, while 9 10 another arm of NIOSH is going around the country urging workers to file SEC petitions. 11 It's particularly galling to claimants that 12 13 NIOSH is devoting resources to its contractors and consultants to fly around the country 14 encouraging workers to file petitions on the 15 hand, only to have NIOSH make the 16 one determinations against these petitions on the 17 other hand. We've also seen a huge volume of 18 19 claims being returned to NIOSH by DOL for, quote, "reworking," unquote, which has further 20 undermined what NIOSH's - whatever NIOSH's 21 claimants credibility with the 22 was and

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1 constituents.

2 The building trades department has repeatedly asked NIOSH to develop an approach 3 to construction workers dose reconstruction 4 would take into the 5 that account unique 6 employment pattern and unreliable dose 7 monitoring with respect to these workers. nagging NIOSH finally 8 After five years of problems 9 agreed that there were with 10 performing dose reconstruction for unmonitored construction trades workers and released this 11 OTIB-52 in August of 2006. Both the Center to 12 13 Protect Workers Rights and the Board's contractor SC&A expressed concerns about the 14 15 bounding methodology incorporated into that 16 document. It does not appear that NIOSH has made any changes to it, nor has the Board ever 17 reviewed it. On November 28, 2007, NIOSH 18 19 issued the OCAS PER-014 which contained an analysis of the number of construction trades 20 workers claims for which the estimated dose 21 could be materially altered as a result of 22

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applying OTIB-52. It concluded that a total 1 2 of 977 claims which had already been awarded at PoC of at least 36.8 percent, 29 percent at 3 Hanford, and that needed to be evaluated. 4 We believe significant 5 that this а may be underestimate for two reasons, applying 6 а 7 wrong adjustment factor and not identifying all the construction trades workers in NIOSH's 8 database. 9

10 OCAS applied an adjusted multiple of 1.4 to extrapolate dose from environmental 11 believe 12 adapt coworkers. We that on 13 multiplier is low for the following too that established 14 reasons were in а joint 15 Center-NIOSH working meeting in July of 2005. 16 It appears that NIOSH has compensated for the breathing 17 higher rate amonq construction workers, but has not demonstrated that it has 18 19 compensated adequately for the greater 20 variance and exposures amonq construction workers. 21

We performed an assessment of how

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complete the search terms identified in PER-1 2 014 using three comparison files of terms the of Labor Statistics standard of Bureau 3 classification 4 occupational terms, construction and extraction operations. 5 The building and construction trades department's 6 7 jurisdictional definition of building construction trades and terms gleaned from 8 work history interviews with 3,200 former SRS 9 10 construction workers conducted by the Building National Medical Screening Trades Program. 11 This comparison is in Exhibit A which I will 12 13 furnish to the court reporter, however that found extensive omissions works. We of 14 15 important search terms in this PER-014 list, 16 which most likely would lead NIOSH to miss substantial numbers of construction trades 17 workers at SRS and any other DOE site when it 18 performs a retrospective search of its claims 19 For instance, the trade of roofer 20 database. was omitted entirely and large numbers of key 21 sub-trade terms were also missing such as 22

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1 floor layer, or hazardous materials, or waste 2 removal worker. "Security" is not used by NIOSH as a search term even though 10 percent 3 of the workers interviewed said a major task 4 5 they performed was security duty. This demonstrates our view that both the NIOSH 6 7 staff audit and its contractor are severely lacking in knowledge of construction work and 8 construction workers. 9

10 As the building trades have continued lose faith in to NIOSH's 11 performance. They have relied on this board to 12 13 protect claimants from the administration the arbitrariness of procedures that NIOSH has 14 adopted. However, we must say that faith is 15 also eroding. The building trades has asked 16 for several years for an independent quality 17 assurance evaluation all of construction 18 19 worker claimant dose reconstructions. As yet this has not been done. The building trades 20 has also asked for several years that the 21 Board undertake a statistical analysis of dose 22

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1 reconstruction outcomes, comparing 2 construction worker claimants to other workers. This has also not been done. 3 In 4 short, there's no evidence to support this board's reliance on the integrity of NIOSH 5 dose reconstruction process as it applies to 6 7 construction worker claimants. I'd like to underscore that point. 8 Let me address for a couple 9 of 10 minutes the handling of the SRS petition. In 2007 the petition was November of filed, 11 contending that workers at the SRS site were 12 13 inadequately monitored between January 1 of 1950 and December 31, 2007, and they should be 14 15 accepted as a special exposure cohort under 16 the provisions of Section 36.26 of the petition was 17 statute. That accepted for review in March of this year. The section 18 19 states that the Board shall accept classes of workers as a member of the SEC if, one, it is 20 feasible to estimate with sufficient 21 not accuracy, the radiation dose that the class 22

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1 received, and two, there is а reasonable likelihood that such radiation dose may have 2 endangered the health of the class. I think 3 that's the last slide, next to last slide on 4 NIOSH then 5 Tim's presentation. developed procedures for designating classes of 6 7 employees as members of the SEC. NIOSH in its evaluation report regarding the 8 SRS SEC interprets this to mean that both the statute 9 10 and 42 CFR Part 83 required NIOSH to evaluate qualified petitions requesting that the 11 Department of Health and Human Services add a 12 13 class of employees to the SEC. The evaluation is intended to provide a fair, science-based 14 15 determination of whether it is feasible to 16 estimate with sufficient accuracy the radiation doses of the class of employees 17 through NIOSH dose reconstructions. 18

We take exception to this. We do not believe the evaluation was either fair or science-based. We believe NIOSH's procedures continue to be replete with conflict of

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1 interest and a lack of standards, lack of 2 standards for determining its findings. Presumably the science-based approach that 3 NIOSH refers to can be found in the standard 4 NIOSH applies to determine "with sufficient 5 accuracy" which is in 42 CFR Section 313, 6 7 radiation doses can be estimated with sufficient accuracy if NIOSH has established 8 that it has access to sufficient information 9 to estimate the maximum radiation doses for 10 every type of cancer for which radiation doses 11 reconstructed that could 12 have been are 13 incurred in plausible circumstances by any the member of class, if 14 or NIOSH has established that it has access to sufficient 15 16 information to estimate the radiation doses of members of the class more precisely than an 17 radiation estimate of the maximum dose. 18 19 Translated, the building trades have objected this provision from the 20 to time it was established. This standard simply 21 says sufficient accuracy is whatever NIOSH decides 22

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1 it should be. There's not a shred of science 2 incorporated into this standard. In Table 4.1 of the evaluation report NIOSH has identified 3 1,798 construction trades claims 4 out of а total of 3,264 claims for its SRS. 5 It gives no methodology for how these claims 6 were 7 identified, but it presumably used a text search of occupational terms. We assume that 8 it used the same methodology as detailed in 9 10 OCAS-PER-014. Nevertheless, there is no reference to that document in this evaluation 11 report, and given the deficiencies in NIOSH 12 13 delineation of construction trades workers occupations as noted above in my prior few 14 15 minutes ago, we believe this evaluation report 16 is so highly deficient and incomplete that it is seriously flawed. 17 We have reviewed Section 5 of the 18 19 evaluation report in some detail. It lists

the radiological operations relevant to class 20 evaluated by NIOSH, i.e., the construction 21 operations from 1950 to 2007. This including 22

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1	the list of Savannah River site events
2	chronology in Attachment A of the report is
3	not at all an accurate characterization. This
4	is a general listing of site events that is
5	lacking in construction-specific information.
6	In other words, it is not specific to or
7	particularly relevant for the class evaluated.
8	We have reviewed our own site history
9	information and have found very serious gaps
10	in the history. We have included a list of
11	missing construction activities with
12	significant potential for radiation exposure
13	which you may find useful as you consider this
14	report, and we will submit that as Exhibit B.
15	This lack of understanding further
16	compromises the NIOSH evaluation report.
17	Section 6 of the evaluation report
18	focuses on whether the radiation dose records
19	at SRS are adequate to make a retrospective
20	dose reconstruction, including when used to
21	extrapolate exposure history when such records
22	may be missing. NIOSH asserts that it could

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1 perform this work using two types of records, 2 the so-called HPAREH electronic database of annual radiation dose summary data for any 3 termination 4 worker who has а date after January 1, 1979, or paper dose records for any 5 6 worker terminated before 1979, or visitors to 7 the site before or after 1979. There are specific examples not cited in the NIOSH 8 evaluation report which contradicts this 9 10 assertion. Construction workers have witnessed in their affidavits that massive 11 amounts of paper records were destroyed when 12 13 DuPont ceased to be the operator of Savannah River. That would significantly impact on the 14 15 integrity of records available to document for workers who terminated before 16 exposure 1979. NIOSH has not addressed this concern. 17 In 1988 the K reactor was shut down for a 18 19 total of 265 days. During this shutdown the radiation 20 reported average dose for construction workers was 2.8 times greater 21 than for day reactor operators. So for these 22

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1	workers, extrapolation from coworker data
2	would not be valid. And even if the
3	adjustment factor of 1.4 allowed for in OTIB-
4	0052 is applied, the extrapolation would
5	understate actual exposure by a factor of 1.
6	To reiterate, during a significant period of
7	time for a significant number of workers the
8	measured exposure for construction workers was
9	twice the level for production workers. And
10	if your coworker extrapolation model is
11	applied to these construction workers for this
12	period of time it would understate actual risk
13	by 50 percent.
14	In summary, we have documented that
15	there are critical flaws with NIOSH's
16	understanding of construction occupations and
17	critical flaws in its undertaking of
18	construction operations at the SRS. NIOSH
19	agrees that it has to use coworker
20	extrapolation for many if not most
21	construction worker claims. This process is
22	extremely suspect and should lead any

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1 reasonable person to conclude that any attempt 2 by NIOSH to use coworker extrapolations to bound doses for unmonitored construction 3 should 4 trades workers be considered too unreliable to 5 be used in any standard of 6 administrative review. That concludes my 7 statement, Mr. Chairman, but I wonder if you would give me an additional minute. 8

Like I said, I've been at this work 9 10 since 1986 and it's undisputed in all of the hearings and documentation that all of these 11 sites did not have appropriate safety 12 and 13 health programs to protect the workers. There is no dispute. Every Secretary of 14 Energy 15 since Admiral Watkins has conceded that. It's 16 not surprising then that there are a number of sick workers, and it's also a 17 matter of history that the normal workers compensation 18 19 programs that should have assisted these workers simply failed because of the nature of 20 the secrecy and the occupational exposures 21 that systems simply couldn't handle. 22 those

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1 This law was designed to pay the workers who 2 became sick. The system is not working. It was not - the way this process is going is not 3 I feel that those of us 4 what was intended. who have made the effort and supported the 5 movement of this program from the Department 6 7 of Energy to the Department of Labor and NIOSH, that we have failed these workers and 8 9 there's got be а better way than to 10 demonstrating how many years it's going to take to get a claim resolved. And then you 11 group of workers that meet all 12 the have а 13 requirements of employment and illness, and somehow two-thirds of them don't qualify when 14 15 you get the dose reconstruction. It seems to me that we need to think about not Larry's 16 chronology of how long it takes to process a 17 case, but the fact that this statute went into 18 19 effect in 2001 for workers who had been suffering for the previous decades. 20 It failed in its mission at the Department of Energy and 21 Congress amended this in 2004. It is now 2008 22

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1 and many of these people who have been waiting 2 on line are still waiting, and that's the dilemma that I think we have to understand, 3 4 that the people who are represented in this, in this and all 5 claimants room over the country have a right to have their problems 6 7 resolved in a reasonable and speedy time, and having to wait decades for this kind of 8 they're still looking 9 redress because for 10 records that don't exist and creating extrapolations out of whole cloth is simply 11 I apologize for putting this 12 inappropriate. 13 burden on the Board, but in the 46 years that I have been working with workers and their 14 15 problems, this is by far the most frustrating 16 experience that I have ever had, and I'm sure those of you who have been working in this 17 process feel equally frustrated. And I just 18 19 wanted to make that personal statement for 20 your record here. Thank you. CHAIR ZIEMER: Thank you very much, 21 Don, for participating with us here today. 22 Ι

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believe that petitioners have one or two Mr. Rowe, were there others? others. Yes, have individual who is okay. We an representing someone who could not be here today and he will identify himself.

MR. WARREN: My name's Bob Warren. 6 I'm 7 а lawyer from Black Mountain, North My address is Post Office Box 1367 8 Carolina. appreciative of the stand here 9 and Ι am because my Parkinson's is a little shaky and I 10 hope you can bear with me a little bit. 11 I've been working since the mid-1970s for Savannah 12 13 River workers at the Savannah River site, and since January of 2002 I've been representing 14 15 claimants with EEOICPA claims Savannah at 16 River and weapons plants around the at Tonight - this afternoon, 17 country. I'm representing [Identifying Information] who is 18 19 one of the petitioners in this SEC petition. his gravely ill wife 20 He is with at the hospital now and wanted me to make sure we 21 covered some things in his petition. 22

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1 When we looked at the SRS needs 2 assessment Phase I, that assessment said we unable make independent 3 were to an determination about 4 which hazards employees were most likely to be exposed during their 5 employment at SRS because of the uncertainty 6 7 and gaps in the monitoring data. And we also [Identifying pointed out that Information] 8 worked in 221 F and 221 H where film badges 9 10 were not regularly worn at the time he was working there and without health physics being 11 He particularly cited as an example 12 present. 13 the badges were taken up on Friday and they were brought back on Monday. Well he worked 14 15 the weekends. There was on no badqe to monitor for the whole time he worked on the 16 And these are the workers that NIOSH 17 weekend. says they're going to use those records to 18 19 calculate the construction trades workers. Ιf you don't have good data for one thing, how 20 can you use that record to justify others? 21 Also, in [Identifying Information] petition we 22

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1 cited many workers that were performing jobs 2 would be considered construction or that construction support but were employed under a 3 4 classification of operations or production that did not have a construction title. 5 And listed numerous jobs, crane operators, we 6 7 backhoe operators, power and reactor workers, operators, riggers, maintenance 8 inventory workers, truck drivers 9 mechanics, hauling waste, radioactive 10 and nonradioactive, to construction sites, delivery 11 drivers, surveyors, workers who cruised or cut 12 13 timber, workers who escorted construction workers - these were called escort services 14 where they would 15 workers extort the construction worker into and out of 16 radioactive area, and then they would remain 17 there with the construction workers until the 18 19 job would be done. Those workers aren't included as construction workers. 20 We cited laundry workers who cleaned radioactive 21 clothing. Cleaning personnel, 22 instrument

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1 repair workers, workers who serviced vending 2 machines in hot where construction areas workers were working. Particularly the things 3 administrative 4 cited were and lab we There were about 2,200 females 5 personnel. that were listed as administrative personnel 6 7 and NIOSH classifies them as saying they were expected to get 30 mrem in their entire work. 8 When they went out into construction areas 9 10 and delivered or collected mail, they brought checks or test samples from the construction 11 workers, and they weren't monitored. 12 They had 13 visitor badges when they would go in there and then the visitor badge records were not valid. 14 15 So NIOSH has just conveniently overlooked all of these. 16 There were other similar jobs in 17

the areas where construction was working for 18 19 operations and production. Then had we submitted that review and we informed 20 were that the NIOSH director would appoint three 21 Services Department Health 22 of and Human

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1 personnel to conduct an independent review of the proposed findings. We had [Identifying 2 Information] and others participating in these 3 May meetings, May 2008 meetings. 4 There are 29 pages of minutes that aren't considered in the 5 NIOSH evaluation. They list in there saying, 6 7 one, DOE - it's not accessible by DOE and the other they had it accessed by DOE but hadn't 8 taken that into account. This is not only the 9 May meetings, but we and people in this room 10 have been to numerous meetings down here where 11 thev cite instances where they're 12 not 13 monitored, where there are crapped up people and workers that have no records on all of 14 that, yet NIOSH says give us some evidence and 15 then they haven't produced the 16 sav we In a letter dated June 27, Dr. John 17 evidence. Howard informed [Identifying Information] that 18 19 the appointed panel had reviewed the materials in the petition, stated that petitioners had 20 not provided sufficient information to extend 21 the class definition beyond SRS workers 22

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1 classified as construction workers. Dr. 2 Howard in his letter did not mention the minutes of the meeting 3 May that was 4 specifically convened by NIOSH to get the information that would support the petition. 5 So they ask us for the information, don't look 6 7 at it and then say we haven't provided sufficient information. After seeing that Dr. 8 Howard's panel did not review the May meeting 9 10 minutes, this petitioner then asked that NIOSH Howard's decision rescind Dr. and either 11 class definition all 12 extend the to SRS 13 workers, have another panel review or the findings after having access to all relevant 14 15 information. We also asked for minutes, 16 notes, other material given made to or this panel, including 17 available to а preliminary or final report to Dr. Howard. 18 19 This request was made in July. As of today been provided to 20 nothing has [Identifying Information]. 21

Sometime in late September 2008

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NIOSH did put the minutes of the May meeting 1 2 on its website, but didn't send the minutes to the meeting copies of everybody who signed the 3 4 meeting roster although at the meeting they were told that if you didn't have access to 5 the web they would be made available to these 6 7 people that participated. That hasn't been On or about November 17, [Identifying done. 8 Information] received the evaluation report 9 10 from 94 pages. In the report, NIOSH not only recommended disgualifications of construction 11 workers, but also did not recommend expanding 12 13 the class to all other workers. Instead of utilizing these statements at the May meeting 14 other meetings, NIOSH discounts 15 at the or worker's evidence on having no monitoring or 16 external radiation exposure. 17 Mainly they didn't look at it. On Page 72 of the report 18 19 NIOSH found that a forestry worker who was not his 20 monitored during employment with the Forest Service onsite, but then concludes that 21 this Forest Service worker's radiation dose 22

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1 can be calculated by environmental and dose 2 conversion factors. This conclusion conveniently overlooks what this worker told 3 at the May meetings regarding exposure to high 4 levels of radiation without any protective 5 clothing or equipment. This worker also 6 7 explained his exposure to railroad ties and eventually found trees that were to be 8 contaminated after years of working in close 9 10 proximity to these ties and trees. Tree sale was canceled, trees were burned by an outside 11 contractor because they were radioactive, 12 13 while the ties were taken to the burial ground onsite. 14

[Identifying Information] came 15 to meeting, told about working 16 the May on weekends without wearing a film badge, 17 of having plutonium and other radioactive 18 19 substances show up in his records after he had a whole body count when he terminated his 20 employment. Others at the May meeting told of 21 having no protection or monitoring devices in 22

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1 radiation zones. Instead of looking into 2 whether had DOE records the or not on individuals 3 that presented at the we May meetings and at others, NIOSH concludes that 4 another class of 5 the records for workers exists that would provide coworker doses for 6 7 any worker that was not monitored. We give the evidence, give the NIOSH tracking number, 8 they don't even look at the records in that 9 10 individual's file. The phantom data on coworkers apparently suddenly appeared without 11 any connection to the reality of construction 12 13 and non-construction workers having the same problem, not being monitored when they left 14 15 their badges outside the radiation zone or having radiation monitors that did not work. 16 The NIOSH method apparently ignores examples 17 of workers who were sent home with a raincoat 18 19 and plastic shoes after being required to leave all of their clothes at the site, all of 20 their money, wallets, and then there are no 21 records of those individuals. We give NIOSH 22

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the worker's name, we give them all 1 the 2 information and they say we're not looking at those records, we've got other records. Ι 3 4 wonder if in this room the people that have filed claims that haven't gotten 50 percent, 5 if you all would just stand just so we'd see 6 7 where we are in this. If you had a claim that didn't get 50 percent. And if any of you had 8 insufficient monitoring records, if you would 9 10 stay standing. Thank you. I think the panel saw that there was a substantial number. 11 [Identifying Information] asked 12 13 this panel to have an SEC at Savannah River site for all workers, or in the alternative to 14 have an audit of NIOSH's methods so that we 15 could get the correct information to the panel 16 so they all can make an informed decision. 17 Thank you. 18 19 CHAIR ZIEMER: Thank you, Mr. The chair is going to suggest a 10-20 Warren. minute comfort break. We will continue with 21 the presentations from the petitioners, but 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

let's all take a 10-minute break and then
 resume our deliberations.

3 (Whereupon, the above-entitled 4 matter went off the record at 4:10 p.m. and 5 resumed at 4:22 p.m.)

CHAIR ZIEMER: We are continuing 6 discussion of the Savannah River 7 our SEC petition. I have on my list the name of one 8 additional petitioner who indicated she wished 9 10 to speak, and I'm not allowed to say who that is unless she identifies herself. Was there 11 one additional petitioner here who wished to 12 13 speak to the assembly? Okay. Perhaps if she comes in later she can speak at the public 14 15 comment period.

16 Now we are going to hear briefly from the Board's contractor SC&A. At its last 17 meeting the Board tasked its contractor SC&A 18 19 to do initial paper review of the an 20 evaluation report. Now, a paper review really means it's sort of a preliminary review, an 21 early review, not an in-depth review because 22

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1 of the time factor, the evaluation report 2 having been issued very recently, and our contractor also being on sort of an - almost a 3 day-to-day basis right now because of 4 the ending of their contract. So this, I guess 5 I'll characterize it as a kind of preliminary 6 7 review, but it will help the Board at least get underway in its evaluation of the NIOSH 8 report and considering its path forward. 9 So 10 on behalf of SC&A we have Steve Marschke and Steve is going to give us a brief summary of 11 the preliminary findings or comments from our 12 13 contractor. 14 MR. MARSCHKE: Thank you, Dr. 15 Ziemer. Can you hear me? Thank you, Dr. Ziemer. I don't have a fancy PowerPoint slide 16 I have a Word document here, 17 presentation. but I think we can work our way through it. 18 19 Maybe. The first thing is just the title 20 page from the document. As Dr. Ziemer said, 21 we were given this assignment in September, at 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS

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1 the September board meeting and at that time 2 the evaluation report was not available to us. So what we did was we took a look at the 3 petition itself which is something that SC&A 4 usually does not do. We usually focus on the 5 evaluation report and make our comments on the 6 7 evaluation report. So, and the other thing I want to say is, at this point we have a report 8 which has been completed. Our review of the 9 10 evaluation is not complete, but this first study is completed and it's 11 step paper currently being reviewed by the DOE and after 12 13 they get done with their review it should be made available to the Board and NIOSH and 14 anyone who is interested in it. 15

The second slide that I have here 16 is just kind of a ground rules slide of what 17 the petitions were and the NIOSH determined 18 19 the proposed class when they did their qualification of the petition. 20 And you can see basically, as Tim mentioned earlier, NIOSH 21 has restricted the petition to construction 22

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1 workers. We did not review the process that 2 NIOSH undertook to revise the petitioner's proposed class to their class. The other 3 4 thing that hasn't been really talked about is that there is in fact two petitions, or it's 5 been explained to us that there are 6 two 7 petitions. We've talked primarily about SEC-00103, but there's also a second petition, 8 SEC-00104, which, if you look at the bottom 9 10 here, is totally encompassed by SEC-00103. So it was merged for - I think NIOSH merged it 11 with SEC-00103 in their evaluation report. 12 13 And again, we didn't undertake any review of either the merging of these the 14 or redefinition of the proposed class. 15

This is just a list of some of the 16 attached to each of the petitions 17 are And this is a list of documentation. the 18 19 documentation that was attached to SEC-00103. There were 13 affidavits. 20 There were four attachments and most of them came from the 21 Center Protect Workers Rights, and 22 to the

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third attachment itself had an 1 attachment 2 which was the - this one right here - the best estimate for daily ventilation rates. 3 SEC-00104 had three attachments to document it. 4 One of them was, the first one was 5 a dose reconstruction and another 6 one was а 7 consultation results and a request for nonradiological information. Our approach was 8 to, again, since we didn't have the evaluation 9 10 report, our approach was to look at each one of these pieces of documentation and do a 11 review on each of those. Aqain, that's 12 13 really you can see here, our first question we asked ourselves was how well do the affidavits 14 and attachments supplied with the petition 15 the petition's claim to the 16 support availability and quantity of dosimetry data 17 for SRS construction workers. That was the 18 19 first question that we asked ourselves. And to do that what we did was we looked at each 20 of the 13 affidavits, and in the report you'll 21 see we have summarized each of the affidavits, 22

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and then we give a little - our opinion of its 1 2 applicability. And then after - I have not presented that here because that's a little 3 bit too much detail for this presentation, but 4 what we did then was we stepped back and 5 6 looked and said what are these 13 affidavits 7 trying to tell us in total. And we felt that the affidavits were trying to say 8 was а monitored worker dose under-recorded. 9 And 10 these are four kind of examples of where the affidavits indicated that such doses may have 11 under-recorded. 12 been Mr. Rowe and 13 [Identifying Information] I think have touched on each of these four areas. Dosimetry is 14 15 going off scale and no apparent action taken, 16 working on off-shift hours when dosimetries were not available, and so on and so forth. 17 We feel that follow-up investigations 18 are 19 necessary to determine the extent or the impact of these concerns on the SEC. 20 The other item 21 that we have

22 indicated here is there's been a lot of

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1 discussion today about HPAREH and we feel that a follow-up investigation is also necessary to 2 ensure that HPAREH faithfully reflects the log 3 Regarding SEC-00104, as I mentioned in 4 books. previous slide, 5 the there dose was а reconstruction attached as of the 6 one 7 documentations, as part of the documentation, and we weren't quite sure why it was attached, 8 undertook review of that 9 but we а dose 10 reconstruction and we felt that \_ in our review we looked at it and we felt that there 11 adequate monitoring was provided for 12 was \_ 13 that particular dose reconstruction. However, we haven't reviewed this individual case to 14 see how it relates to the reconstruction of 15 all members in the proposed class. And so 16 that's work that remains yet to be performed. 17 The second question asked 18 we 19 ourselves when we were reviewing the SEC was since NIOSH has in place methodologies 20 for performing dose reconstruction and has in fact 21 dose performed number of the 22 а

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1 reconstructions, how well do those 2 methodologies address the availability and limitations in the quality of the SRS worker 3 dosimetry data. And what we did for that was 4 we undertook a review of a number of NIOSH 5 documents, including the site profile 6 7 document, OTIB-32, OTIB-52 and PER-14 for external exposures. The site profile document 8 again for internal exposures, OTIB-1 and OTIB-9 10 52 again for internal exposures, and the site profile review for medical and environmental 11 exposures. 12 13 Our preliminary results, and again all that these results 14 Ι stress are 15 preliminary results, is that documents - all 16 the documents that we listed above have been previously reviewed by SC&A, and there are a 17 number of outstanding issues associated with 18 19 each one of them. What we did was we the previously raised 20 revisited issues and

21 determined their applicability for

22 construction workers.

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1 When we did that review for 2 construction workers, again there are a number of technical issues out there, but we look at 3 them from the determination of whether or not 4 any of them were unique to SRS construction 5 workers, and we could not identify any of the 6 7 outstanding issues that would be unique to SRS construction workers. That being said, 8 assuming that the is relatively 9 HPAREH 10 complete and reliable, the coworker model set forth in OTIB-52 appears to be generally 11 scientifically sound and claimant-favorable. 12 We've reviewed OTIB-52 elsewhere and we found 13 that there are some exceptions to this rule. 14 15 Sometimes pipefitters would be an example who 16 tend to have exposures which are not bounded by the OTIB-52, or 17 in some cases are not bounded by OTIB-52. Hence we need to - this 18 19 issue needs to be revisited in an SEC context which requires the reconstructed dose to be 20 bounded. 21

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Then the next slide is - this is a

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slide which kind of - I don't know what this 1 2 is saying here. This is a slide which when we say OTIB-52 methodology is bounding generally, 3 this is an indication of what we mean here. 4 is a plot of the HPAREH dose records 5 This versus the OTIB-52 methodology. What we did 6 7 each blue dot is a construction worker and the doses are their total - the sum of all their 8 HPAREH records. And we compared that to what 9 10 their dose would be if we used the OTIB-52 methodology to calculate their dose. And if 11 you take this individual here you can see that 12 13 in his working history at Savannah River site he received a total - he or she received a 14 15 total of about 34 rems. If he were to take 16 that same individual and calculate his or her dose using the OTIB-52 methodology you would 17 see you get about 55 rems. So that's what 18 19 we're saying is - that's why we say that we 20 believe the OTIB-52 methodology to be generally claimant-favorable. 21 You can see that anything that is below this diagonal line 22

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here would mean that the OTIB-52 methodology would result in a higher dose than what was recorded in the HPAREH. You can see that there are some individuals over here which fall on the non-claimant favorable side of the line.

14 the 7 On November evaluation report was published by NIOSH. And I should 8 that we were trying to 9 point out get our 10 report out, our paper study out by December 1, didn't give us a lot of time to so that 11 evaluate the evaluation report or to review 12 13 the evaluation report. So what we did was an limited initial review of the evaluation 14 15 and, our main concern was that the report; 16 evaluation report does not address the 17 concerns expressed by the petitioners, specifically those four items that 18 we 19 discussed on the previous slide. We believe the petitioners did raise some valid 20 that concerns that bear on the completeness and the 21 reliability of the database upon which the 22

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1 coworker models are based. What we're saying 2 is, again, the workers potentially were exposed to radiation which was not recorded in 3 their dose records. So therefore it can't be 4 reflected in HPAREH even if there was a good 5 agreement between HPAREH and the log books 6 7 because it's really not in the log books. So a review of the petition and the evaluation 8 report requires considerable further work, 9 including interviews with the petitioners, a 10 data completeness and adequacy review, 11 an method review, 12 internal dose adequacy of 13 incident coverage and whether HPAREH reflects actual work experience. And that's all I have 14 15 If there are any questions? prepared. CHAIR ZIEMER: Thank you very much, 16 Steve, for at least that initial look at the 17 petition and the evaluation report. Board 18 19 members, questions for Steve right now? Now, what we will be doing, and much of this will 20

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taking

occur during our work sessions later in the

into

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the

consideration

1 petition, the evaluation report, our 2 contractor's preliminary report, this board will need to decide what the path forward will 3 It's the sense of the chair that we are 4 be. not close to a position where we would wish to 5 make a formal recommendation at this point. 6 7 There's a lot more work that clearly needs to be done, but the path forward we'll have 8 opportunity to define, and we'll of course 9 10 very shortly have the opportunity to hear from many more of the folks onsite. Mr. Griffon? 11 I think we are in MEMBER GRIFFON: 12 13 little different position with this one а because we've assigned SC&A to review 14 the 15 evaluation report as well and bring it back to 16 the Work Group. Right. 17 CHAIR ZIEMER: MEMBER GRIFFON: So we're already 18 19 kind of -20 CHAIR ZIEMER: Right, so -GRIFFON: 21 MEMBER path \_ our forward, yes. 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

1 CHAIR ZIEMER: Part of the path forward is defined. We do have a work group 2 which Mark is chairing, and they will be 3 4 meeting and looking at all of these issues, but if there's any additional tasking that's 5 needed we will have the opportunity to do that 6 7 as well. MEMBER GRIFFON: Can I just say one 8 more thing? 9 10 CHAIR ZIEMER: Yes, you bet. MEMBER GRIFFON: As the chair of 11 the Work Group on Savannah River, we haven't 12 13 convened this work group in awhile and part of the reason we started out reviewing the site 14 15 profile, and still have а number we of outstanding issues on the site profile which I 16 think will overlap with some of the issues 17 identified in the petition and in the 18 19 evaluation process. So we have to continue on We sort of put it on hold because we 20 those. knew this petition was coming down the line 21 and it didn't make sense to use our efforts to 22

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go forward without waiting for the petition 1 2 and looking at that. Having said that, I also am concerned. Several of the items that NIOSH 3 brought up in their presentation look like 4 we're still pending some data. 5 Data exists and while I understand that NIOSH's hurdle 6 sort of is to show that data exists to be able 7 to sufficiently calculate doses, our board 8 procedures, I'll remind all of us that we have 9 10 a little bit of a higher hurdle that we've put in place which is to look at the data validity 11 as well as the proof of principle, and several 12 13 of the items that Tim, Dr. Taulbee outlined in his presentation mentioned that they have data 14 or they're in the process of entering this 15 data. It hasn't all been QC'd yet. I think I 16 heard one of the TIBs is going to be available 17 in the spring. So Ι just а little 18 am 19 concerned that all these tools and things are fairly 20 in place soon and we can have everything we need to evaluate on this work 21 But given that, I think we're going to group. 22

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- I did talk to NIOSH earlier and we plan 1 2 certainly on getting this work group back onboard in full force in early next year now 3 that we have the evaluation report in place 4 and everything. So. 5 CHAIR ZIEMER: Thank you, Mark. 6 7 Wanda Munn? You have on this topic? MEMBER MUNN: One brief correction 8 for the record. 9 10 CHAIR ZIEMER: Oh, okay. MEMBER MUNN: It was stated earlier 11 that this board had not even looked at OTIB-12 13 52. I wanted to point out that OTIB-52 has been very thoroughly debated in our procedures 14 15 group, that since 2007 we've had a total of 16 16 items that we have addressed specifically with respect to this procedure which is entitled 17 Parameters for Processing Claims for 18 19 Construction Workers. So it is actively being There are still -20 pursued. CHAIR ZIEMER: Still 21 some open issues yet. 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. WASHINGTON, D.C. 20005-3701

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258 There are still some 1 MEMBER MUNN: open issues but it has been reviewed in great 2 length. 3 CHAIR ZIEMER: Right, and is still 4 in process. Thank you. And Jim? 5 6 MEMBER MELIUS: Perhaps the procedures work group could update the whole 7 board on that at some point? 8 CHAIR ZIEMER: Well, they will be 9 10 reporting. MEMBER MELIUS: The members of the 11 Board have not heard this. 12 13 CHAIR ZIEMER: Right. MEMBER MELIUS: Second, my question 14 15 to Mark was in your discussions do we have a timeframe for SC&A to review the evaluation 16 report and present something? 17 MEMBER GRIFFON: I didn't know if 18 19 we were going to talk about that here or in our path forward discussion. 20 Well, we'll talk CHAIR ZIEMER: 21 about it in the tasking. I think we may have 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

already tasked them to do this and I'm trying 1 2 to recall from the last meeting. MEMBER MELIUS: That's why I asked. 3 My understanding -4 MEMBER GRIFFON: But John Mauro is 5 shaking his head no, so I think -6 7 CHAIR ZIEMER: Okay. There was only the paper review perhaps that was tasked, 8 but. 9 10 DR. MAURO: Let me help out a little bit. When you were tasked during the 11 Redondo Beach meeting it was recognizing that 12 in the near future the evaluation report would 13 come out. And so at that time we were tasked 14 15 to look at the petition itself. However, we 16 also in communication with Mark were regarding, listen, you know, 17 we know the evaluation report is going to come out. Ι 18 19 also spoke to Ted about it. I said listen, once the evaluation report comes out what do 20 you think we should do here? I mean, we're 21 sort of in a gray area. Normally our initial 22

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1 process is to read the evaluation report in 2 conjunction with the petition. So I guess, in consultation with Ted he said listen, please 3 review the evaluation report to the best of 4 your ability in anticipation of this meeting 5 so that you could have at least some initial 6 7 findings. But I guess formally at the meeting itself in Redondo Beach we really weren't 8 formally tasked with that. 9

10 CHAIR ZIEMER: Okay. So we need to do formal tasking at this meeting. And as I 11 indicated before, I think we're going to have 12 13 in the position of tasking to be our contractor, whoever it may be. And we could, 14 15 we could ask that priority be given to getting something underway. I think we have at least 16 till mid-January, but in one sense we would 17 have to think about the funding. I believe 18 19 all of the funding that's available right now is earmarked for closeout. Since this would 20 be a new task and I think we could talk about 21 whether or not new tasking could be done. 22 We

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could talk with David Staudt about that. But it's certainly the chair's sense that we're going to task somebody to do the review. Whether it's SC&A or another entity we will have a contractor that's going to have to do that. So.

I don't know if David will allow us
to assign new tasks, but Ted, we should ask
him about that, David Staudt. We have to
follow whatever the federal rules are on some
of these things, but we've been given fair
flexibility in moving the money between tasks.

MR. KATZ: I'm sure there's no
limitation between spending it on closeout
versus on new task.

CHAIR ZIEMER: So we may have some 16 flexibility that would allow us to get a good 17 start on the in-depth review of the report. 18 19 So we'll talk about that further. Thank you. little time before the public 20 We have a comment session, and Ms. Munn has asked for 21 the floor and I will recognize her. 22

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1	MEMBER MUNN: Thank you, Dr.
2	Ziemer. If we could beg the indulgence of the
3	claimants who are here from the local site,
4	we'd like to take care of a small item of
5	administrative importance to the members of
6	the Board here. We have Mr. Green with us
7	this evening who has not been with us in the
8	last few months, and if it pleases the Board I
9	would like at this time present a resolution
10	to you.
11	CHAIR ZIEMER: That would be in
12	order. The chair will recognize you for such
12 13	order. The chair will recognize you for such a motion, a motion directed toward our prior
13	a motion, a motion directed toward our prior
13 14	a motion, a motion directed toward our prior court reporter Ray Green as I understand it.
13 14 15	a motion, a motion directed toward our prior court reporter Ray Green as I understand it. MEMBER MUNN: Correct. The
13 14 15 16	a motion, a motion directed toward our prior court reporter Ray Green as I understand it. MEMBER MUNN: Correct. The resolution reads, "To all before whom these
13 14 15 16 17	a motion, a motion directed toward our prior court reporter Ray Green as I understand it. MEMBER MUNN: Correct. The resolution reads, "To all before whom these present letters may come, know that we the
13 14 15 16 17 18	a motion, a motion directed toward our prior court reporter Ray Green as I understand it. MEMBER MUNN: Correct. The resolution reads, "To all before whom these present letters may come, know that we the Advisory Boardon Radiation and Worker Health
13 14 15 16 17 18 19	a motion, a motion directed toward our prior court reporter Ray Green as I understand it. MEMBER MUNN: Correct. The resolution reads, "To all before whom these present letters may come, know that we the Advisory Boardon Radiation and Worker Health individually and in group assembled do resolve
13 14 15 16 17 18 19 20	a motion, a motion directed toward our prior court reporter Ray Green as I understand it. MEMBER MUNN: Correct. The resolution reads, "To all before whom these present letters may come, know that we the Advisory Boardon Radiation and Worker Health individually and in group assembled do resolve and say, whereas this body has existed since

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1 our deliberations, and whereas such record 2 necessitated verbatim transcriptions of each meeting of the Board, together with all public 3 therein as 4 comments made well as of all subcommittee and work groups meeting either 5 face to face or by teleconference, and whereas 6 7 the topics and participants in these activities have been numerous and complex, and 8 whereas these proceedings have been recorded 9 10 and reported verbatim with great precision and accuracy by our award-winning court reporter, 11 therefore resolved that for 12 be it his 13 outstanding service, professionalism, friendship and devotion to the work of this 14 15 board we extend our sincerest appreciation to By this document we do Steven Ray Green. 16 hereby express our recognition of his valuable 17 contribution to the work of this body and as 18 19 leaves our service convey upon him he our for continued 20 warmest wishes success and distinction his life. 21 in every aspect of Signed Augusta, Georgia, December 16, 22 at

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2008."

2	CHAIR ZIEMER: Thank you for that
3	motion. The chair is aware that all the Board
4	members have actually signed it so the motion
5	passes, but for the record all in favor say
6	"Aye."
7	(Chorus of ayes.)
8	CHAIR ZIEMER: And Ray Green, if
9	you would come forward.
10	(Applause.)
11	MEMBER MUNN: This is one thing you
12	won't have to transcribe personally.
13	(Laughter.)
14	CHAIR ZIEMER: Ray, if you would
15	just pose there with Ms. Munn who was
16	responsible for generating this and we'll get
17	a picture. And Ray, if you would come up
18	here?
19	MEMBER CLAWSON: Ray, could you put
20	something over your mouth?
21	CHAIR ZIEMER: Yes Ray, we don't
22	recognize you with your full face. And Ray,
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you're not restricted like board members to 1 2 receiving gifts, so on behalf of the Board let me also present you with this, a token of our 3 appreciation, and maybe I should read for you 4 what is on it as well, or you can read it. 5 Let me read the inscription for you. This is 6 7 heavy. It looks like it's filled with marbles but we want to make sure you do have all your 8 marbles. 9 "In appreciation to Steven Ray

10 Green for seven years of outstanding service 11 the Advisory Board on Radiation Worker 12 to Health , August 2008," and below that is a 13 symbol of an atom, a very accurate symbol for 14 15 here study you to as you leave us. Congratulations. 16

(Applause.)

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CHAIR ZIEMER: And board members one thing further. For Ray we know he wants to remember all your mugs very well, so if you're agreeable after the public comment session we'll get together as a group with Ray

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1	and give him a lasting remembrance of this
2	board with mug shots. Ray, thank you so much.
3	MR. GREEN: Do I get to say
4	something?
5	CHAIR ZIEMER: Well, the 10-minute
6	limit is on you.
7	MR. GREEN: I've been waiting seven
8	years to talk. I did just want to say that I
9	can sincerely say the seven years with NIOSH
10	was the best working experience of my career
11	ever, and that may sound like it's convenient
12	because I'm standing in front of you all, but
13	it's the truth, it truly is. And not only
14	have I loved the Board members, but the people
15	at SC&A, the people at OCAS have been
16	absolutely fantastic. Everyone at NIOSH from
17	Dr. Howard to Cory, LaShawn and Zaida and
18	everyone in between has just been wonderful to
19	work with, and I tell all my colleagues it's
20	so wonderful working with the CDC. I actually
21	do have some other entities within the CDC and
22	they're very nice too, but I've got to say the

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1	best was NIOSH. And then there's the
2	peripheral people that I've met through
3	working here like [Identifying Information]
4	and [Identifying Information], and all the
5	wonderful spouses, and it's just been
6	absolutely fantastic. And I won't say goodbye
7	because we all have emails and we can keep in
8	touch, and some of you have been and I really
9	appreciate that. So I'm still listening to
10	you all every day working on this backlog to
11	get your transcripts caught up so it's not
12	like I've missed you very long yet.
13	(Laughter.)
14	MR. GREEN: But I did love it and
15	I'm not going to say goodbye. I think there
16	still may be a future for us, so if you're
17	ever in Atlanta give me a call and we'll hook
18	up for a cup of coffee or something. Thanks a
19	lot.
20	(Applause.)
21	CHAIR ZIEMER: Now we're going to
22	have about five minutes before we start the
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1 public comment period, so if any of you need a 2 quick break, a comfort break, why this is the And we'll reconvene right at 5 o'clock. time. 3 (Whereupon, the above-entitled 4 went off the record 4:54 p.m. 5 matter and resumed at 5:05 p.m.) 6 7 CHAIR ZIEMER: Okay folks, if you'd please take your seats we're qoinq 8 to public 9 reconvene for our comment session. 10 Just а few housekeeping items before we actually begin the comments. We have - the 11 Board has a 10-minute limit on comments, the 12 13 reason for that being to give everybody an opportunity because - and I always add that 14 15 that 10 minutes is not necessarily a goal to be achieved. That's an upper limit. If you 16 can keep your remarks briefer that will be 17 fine because if everybody who has signed up 18 19 takes 10 minutes we have about two hours ahead I'11 just qive you 20 of us. So that as And that's fine, we will be here as 21 quidance. long as needed to hear the comments, but to be 22

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1 fair to those who are at the end, those early 2 on the list need to be cognizant of the time. Also, in general the public comment period is 3 not one where the Board is here to answer 4 questions per se. We're mainly here to hear 5 there's what you have to say. If 6 some 7 particular item like you need to know who to contact about some issue we'll try to help 8 with that, but mainly we just want to hear 9 10 what you have to say.

Now, Mr. Katz is going to repeat 11 the redaction policy. We're required to make 12 13 sure you're aware of this. This has to do with what will or will not appear in the 14 public record in terms of personal information 15 16 because often in the public comment periods individuals share details about perhaps their 17 own claim and sometimes about the claims of 18 19 other individuals, and there are some Privacy Act issues that come into play when this is 20 So Mr. Katz will fill us in on the 21 done. ground rules for that as far as the public 22

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1 record is concerned.

2	MR. KATZ: Thank you, Dr. Ziemer.
3	So the policy is we have a verbatim transcript
4	so that your comments will be taken down
5	exactly as you say them. You do not have to
6	give your name if you do not wish to, you can
7	simply give your comments. But if you do give
8	your name, your name with your comments will
9	remain in the record, and if you give personal
10	information, for example, medical information
11	and so on, that may remain in the record too.
12	Ordinarily it will. But as Paul implied, if
13	you give information about a third party,
14	someone else, that information will be
15	redacted, their name and their identifying
16	information which might be quite a lot of the
17	information that you provide about them. That
18	would be removed from the record. The other
19	points I would just make is if you - let's
20	see, what else. Well, the only other point I
21	need to make is if you wish to address the
22	Board but you don't wish to address the Board

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in public we can try to make arrangements for that. And the full policy for redactions is available where you signed in and it's also available on the website where the agenda of this meeting can be found.

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CHAIR ZIEMER: Now, as we proceed I 6 7 actually have to call you by name in order to have you come and give your comment. So if 8 you have signed the roster and do not wish to 9 10 have your name identified in the record I need to know that right away and you can just come 11 up here before I get started and 12 indicate 13 which one you are, or let me ask it in a different way. Are there any of 14 you who 15 signed for public comment that do not wish to have me call you by name? 16

(No verbal response.)

18 CHAIR ZIEMER: Okay. So I will be 19 calling you to come to the mic by name, so 20 understand that. So your name therefore goes 21 into the public record. You're free to use 22 the mic here. Makes it easier for the Board

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1 to see you, but if you prefer to use the 2 podium or have some materials that you need, you know, some support for you can use the 3 4 podium if you wish. Whatever you're most comfortable in doing. My plan is to go down 5 through the list in the order that you signed 6 7 After we complete the list that I have up. here for those who are locally present I will 8 also give opportunity for folks who are on the 9 10 phone lines that may wish to make public comment to do that as well. So those of you 11 who are on the phone, we will get to you after 12 we hear from the local folks here, most of 13 whom are affiliated in some way or another 14 15 with the Savannah River site, although that's 16 not 100 percent true. But in any event, we'll go down through the list here. First is Donna 17 Hand. 18 19 MS. HAND: My name is Donna Hand.

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going to be very brief because it's going to

be followed by a letter to the Board itself.

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I'm with the Pinellas Plant Workers.

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Mine's

I want a clarification of the law when it 1 2 pertains to cancer and the wounds, and how to treat with the wounds. The problem is that 3 you, HHS, has exclusive control of the cancers 4 and decides which are cancers. The only non-5 radiogenic cancer so far in the law is CLL. 6 7 However, neoplasms, carcinomas are not used, even though the law says they will be treated 8 as if they're malignant cancers. DOL refuses 9 10 to send these cancers to NIOSH. NIOSH refuses to do a dose reconstruction unless a cancer is 11 sent to them by DOL. Whenever you send a, for 12 13 example, squamous cell skin cancer, and it says there is squamous on it, well they say 14 that's actinic keratosis therefore 15 so no, not sending it. Ιt 16 we're says on the pathology report it is squamous. 17 I send it to NIOSH. NIOSH said we can't accept it because 18 19 DOL did not send it to So have us. we that 20 evidence there was a cancer but DOL Now this is exclusive refuses to do that. 21 control of Health and Human Services to decide 22

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what is a cancer and if that cancer, you know, do the dose reconstruction and then let the Probability of Causation decide if it's a radiogenic cancer or not.

Specifically, you're talking about 5 prostate cancer and adding on other cancers to 6 7 the list. Mr. Glover in one of your advisory board meetings stated he thought that that 8 list came from the National Cancer Institute. 9 10 No. That list came from the Radiation Exposure Compensation Act 42.2210 note. 11 In 2004 that was amended to add on renal cancers. 12 13 Before then the Veterans Radiation Compensation Act had prostate cancer. 14 You 15 know, so you have other compensation programs 16 that has radiation that acknowledges prostate. You have switched a bulletin to do dose 17 reconstruction on prostate to bladder. You no 18 19 longer use testes, but yet your Probability of Causation still uses male genitalia. 20 So why the Probability of Causation 21 can't do а bladder like you do the dose reconstruction? 22

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You issued a technical bulletin for that, and I guess it was pre-approved and reviewed because you're using it. So why isn't the Probability of Causation model then the bladder, since you found out, excuse me, that the target organ is the bladder to use for dose reconstruction.

The other issue is wounds. I have 8 gentleman that the authorized 9 I'm а 10 representative of, he was cut three times with They said because he was classified waste. 11 monitored which he should have been 12 not 13 monitored we're not going to use it in dose reconstruction. We do not use it in his 14 15 internal and we don't use it as a separate 16 incident. The law the internal is says injection, injection or cuts and wounds. 17 You have a specific bulletin out for wounds. Ιt 18 19 addresses plutonium, but at the very end it says this is for all radionuclides. 20 They're not using it. I'll give my other time to 21 Savannah River since they're here. Thank you. 22

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1 CHAIR ZIEMER: Okay, thank you very And you are planning to send this 2 much. information to us as I understand it? Thank 3 Next we'll hear from William Hooker. 4 you. Is I know that sometimes people 5 William here? inadvertently register their attendance in the 6 7 wrong book and so he may have thought he was registering and actually signed the public 8 comment list. William Hooker. Okay, then how 9 10 about Harry Carver. Thank you, Harry. MR. CARVER: My is 11 name Harry Carver and I work at Savannah River site as an 12 iron worker. And I had cancer in 2000 and I 13 went through this program and it took them six 14 15 years to finally give me a negative answer. Ι think that was way too long to have to sit 16 around and wait, but this dose reconstruction 17 stuff that they're going through. They talk 18 19 about a log book. I guess those log books was hand-entered by somebody from that site, from 20 RadCon personnel or whatever. I know for a 21 fact in either 2003 or 2004 after I returned 22

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1 to work after having cancer there was a RadCon 2 supervisor that was terminated for having his technicians falsely write dosimetry reports on 3 4 those reports. And he was terminated for that, and the people that did it were also 5 6 disciplined. The one fellow that refused to 7 falsify, to write the right number down, he was not disciplined. The other ones were, and 8 that is wrote down in the log books out there. 9 10 And if one does it, how do you come up with a dose reconstruction with people falsifying 11 records? 12

And there was three of us that 13 worked together in the early `90s out there, 14 We all worked the same 15 three iron workers. 16 We all worked the same area, F-B line, crew. and all three of us in our early to mid-17 forties has had cancer. One of them is dead 18 19 now, real good friend. Another one is here and he'll speak also. 20 It's just highly unlikely that three of in 21 us our early forties, you know, worked the same areas, the 22

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1 same group, and all of us end up with the same 2 - not the same type of cancer, but we all end up with cancers. And my other question is 3 when I found out about all this and the dose 4 reconstruction, I asked my oncologist how much 5 radiation does it take to give you cancer? 6 7 How much does it - what are you all's limits saying here under this dose reconstruction? 8 How - what is the minimum amount of radiation 9 10 exposure it takes to activate cancer? Well, I would like to know that. 11 12 CHAIR ZIEMER: You won't qet а 13 specific answer because it's going to be different for every individual in terms of the 14 15 various cancers all have various -16 MR. CARVER: I have testicular 17 cancer. CHAIR ZIEMER: But I will point out 18 19 MR. CARVER: - I mean, he couldn't 20 tell me. He said there's no, you know, you 21 could get an X-ray, you can get cancer from an 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. WASHINGTON, D.C. 20005-3701

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X-ray, a single X-ray could activate it. Everybody has the potential to have a cancer, you know. So how do you all - I don't understand how you determine what small amount activates any individual's cancer.

CHAIR ZIEMER: I'll give you a very 6 7 general answer, not a detailed one, but this program uses the data from the National Cancer 8 Institute which is the so-called risk data 9 10 which they have developed which talks about the - it leads to the probability of cancer in 11 various organs from various doses. It's based 12 13 largely on the Japanese data, but we can talk, you know, we can talk in detail about that. 14 15 But the group does try to use what we would 16 describe as the best scientific data, and you'll understand that there's uncertainty in 17 that as well. Yes, right. Thank you for your 18 19 comment. Mitch Still. Mitch? 20 MR. STILL: Thank you for your

21 time, I'll try not to take up too much. I may 22 sound like I'm bragging a little bit, but I'm

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1 not. I'm just going to state facts. I worked 2 at the plant for 11 years and I believe in nuclear energy, I believe in nuclear power and 3 4 all that. When I started working Ι was basically a high school graduate, got lucky 5 and got a job. Worked my way up. When I left 6 7 I started my own business. I'd worked there I'd got as high as I could go 11 years. 8 without a college education and I basically 9 10 got bored at that time. Westinghouse had DuPont had left when Pricetaken over. 11 Anderson came in. And up to that time we 12 worked - as a matter of fact in `83 and `84 I 13 think the most plutonium ever run through any 14 reactor in the DOE complex we run it through F 15 area canyons. And there were a handful of 16 guys and women who made that happen. 17 One year I think I worked 87 shifts of overtime. Of 87 18 19 shifts of overtime, they didn't offer overtime to sit around in a control room. 20 It was highradiation work and I think anybody with any 21 reasonable sense could figure out you can't 22

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work an additional 696 hours a year and not have more radiation than the worker next to you.

And where I'm going, the culture we 4 and production were 5 had back then, HP two different things. Production was what it 6 7 said, production. We got the job done. Ιf there were three cars of uranium waiting to 8 come in the canyon, they were going to get in 9 10 and they were going to get in that evaporator, get melted down and get sent to B line. 11 HP, their initiatives weren't the same as ours so 12 13 most of the time we spent our time dodging HP. Most of the high-radiation work was done on 14 15 shifts, done on the weekends. I tried to access a log book from the plant because I 16 told them if you take, from any given time 17 period take a one-month log book from the 18 19 canyon, take the canyon HP supervisor log book, take the lab book where the samples were 20 delivered, also take the DOE morning report, 21 look at the four of them and they won't work 22

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1 out because in production we did things to get 2 the job done, okay? The guy earlier was talking about the trees that had contamination 3 I can tell you how they got there. 4 in them. can tell you all kind of stories 5 and Ι incidents that don't need to be reported. 6 We 7 did what we did to get the job done. The only incidents that NIOSH or anybody will retrieve 8 through records are incidents that were too 9 10 big to cover up when we were working. When I say "cover up" I mean clean up. If we made a 11 mess, we cleaned it up. I deconned myself. 12 to the hot sample aisle to pull 13 We went samples, you milked samples. Nobody 14 ever 15 wanted to bring up what milking a sample was. 16 Milking a sample is you take a sample from the hottest radiation material on the plant 17 out of these tanks that are 20 feet below you, 18 19 you pull a vacuum on them and pull them out. 29.9 inches of mercury is a perfect vacuum. 20 It still won't pull this kind of material up 21 when levels get above 1.5. So there were 22

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1 tricks operators would do to get these to 2 It involved not using the door cast, pull. 120- and 140-pound door cast for shielding. 3 You actually had to hold what is called a 4 peanut in your hand, work it, watch the vacuum 5 needles and get the material flowing through 6 7 it to get a sample, okay? A lot of upper management knew these machines didn't work the 8 way they should, but yet they knew that on all 9 10 shifts certain guys would get these jobs done, When I was hired in we was told that okay? 11 12 radiation wouldn't hurt you any more than 13 wearing a tritium dial watch. I don't - I'm not putting down people. We were just doing a 14 15 job that we were paid to do. And it goes on 16 I mean, waste tank samples, we held and on. them in our hands, did the same things. 17 When you went to get a sample that couldn't be 18 19 pulled legally, you went on the off shift and when you went to the sample box you took a 20 swab and swiped the area. We hadn't been 21 trained in self-monitoring. You swiped the 22

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1 area, you check it with the - I believe it was R-02, I can't remember the exact name. 2 One has the shield to shield out beta and gamma, 3 4 the other one checks for alpha beta contamination. We didn't even care about the 5 radiation beta gamma. All we cared about was 6 7 decontamination. Swipe the floor and whatever it was, hopefully it was lower than background 8 it was building. Ιf lower 9 in the than 10 background in the building, pull your sample. As soon as you get through with it, check it. 11 long as it was lower than background go 12 As 13 back to work. Nobody would know you'd pulled a sample illegally, okay? But if log books 14 are reviewed, and I tried through the plant to 15 get them. They won't give them to me. 16 And they're in records retention because all those 17 log books, we had to save them. They're all 18 19 clearly dated. There's no reason they can't be retrieved, okay? Now I know that DOE has 20 an order up before Congress where they wanted 21 to destroy all records and I think Congress 22

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needs to make sure that doesn't happen. Do I
 have more time?

CHAIR ZIEMER: You've got two
minutes.

Missed dose. Missed 5 MR. STILL: dose, I understand that's a good thing, but 6 7 when you're working 87 shifts of overtime a year and you work in the sample aisle changing 8 out hooks, crane hooks and all, badges weren't 9 10 worn. If HP was on the job, for some reason they were covering a job, a high-profile that 11 12 some upper management wanted to see, you wear 13 other people's badges. If you was in a high beta radiation zone you knew if you switched 14 your badge around in the TLD an open window 15 would be closed, you wouldn't get the beta. 16 Some of these beta fields would be like a 40-1 17 ratio. Dosimeters, they talk about them going 18 19 off scale. You come out of a hot job and if the radiation was extremely hot you tell the 20 HP inspector I dropped it in there so you 21 didn't get that high reading. 22 You were

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refused overtime if you had high radiation and you would not get promoted if you had high radiation. It was almost a condition of employment.

Chemical, trichloroethylene, 5 asbestos. We swept mercury out of the sumps 6 in the H area. F area didn't have as much in 7 their process. We swept it up with brooms, 8 okay, and put it in bottles and sent it to the 9 10 lab where they recycled it. So the toxic exposure never gets brought up, but we was 11 exposed to a lot of that. We even deconned 12 13 ourselves with trichloroethylene. We always didn't get decon with HP either, only when 14 15 used on a job that HP was covering.

16 Now, one other thing that really concerns me is DOE, the Department of Labor 17 and the contractors. I noticed that you have 18 going for construction workers and 19 an SEC They've got somebody to take up 20 that's fine. There shouldn't be a first-line for them. 21 foreman having to come in here and take up for 22

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1 operators at the plant, including myself, 2 because there's no company to take care of us because DOE is just bidding out to lowest 3 4 bidders. And the people at the plant now don't even know it's going to affect them in 5 the future. DuPont left, good riddance. 6 7 There's nobody to represent employees. That's the reason all these lawyers and litigation 8 has to get involved. The people need to be 9 10 represented correctly and we picked up radiation, we called it the trenches. We did 11 We picked up radiation. I've held 12 the work. 13 every product on the plant in my hand. And when you go home at night a lot of times 14 15 you're wondering, I hope I got everything off. 16 I don't want to get it in my house. And I'm not complaining. 17 I got cancer at 47 years old, colon cancer. My first foreman that I 18 19 worked for, he died at 60 with colon cancer, and my second foreman that I worked for, he 20 died last year of colon cancer. You know, Dr. 21 Sanjay Gupta this morning on CNN said that 1 22

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1	out of 100,000 get colon cancer and that's a
2	big coincidence. He said the average age is
3	73 and there's three of us got it before 60.
4	So, and I'm not complaining. I'm lucky. I
5	caught mine early, I can deal with what I've
6	got, but I just wish the workers - every
7	worker's work history should be looked at.
8	The biggest jobs done on the plant,
9	changing out the 2F evaporator involved about
10	a hundred people on an outside radioactive
11	job. It wasn't in a canyon. I was the
12	foreman over that. I understand radiation and
13	I know how the plant works with radiation, and
14	I'd be curious if you're even milking samples
15	today. If the radiation boxes aren't changed,
16	they will. And when operators milk the sample
17	or pull any sample they know ALARA, "as low as
18	reasonably achievable" is what we were taught.
19	What that meant, and the older gentlemen
20	would teach you this, keeps your radiation
21	down. How do you do it? When you go into a
22	box that's got a high radiation, if you're

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1 right-handed, keep your badge on the left side 2 of the chest. If it shines it's going to get your right side, it's not going to get the 3 4 left. So dose reconstruction on a lot of production workers, you would have to figure 5 their missed dose for every day because it was 6 7 nothing to get your limit the first day when a TLD come out. And if you knew you was getting 8 high, was going to get a write-up for it, you 9 10 pick up a TLD badge at the guard shack that It wasn't named, don't even 11 wasn't yours. Just pick it up, nobody would 12 sign it out. 13 ever notice you were wearing it during the I'm not complaining, I'm just day. 14 Okay? 15 stating facts. All these technical documents 16 are full, and I wish the Board had a worker on the Board, and I wish in the future you all 17 would get Get one from Hanford, 18 one. 19 wherever. 20 CHAIR ZIEMER: We have several workers on the Board. 21 I mean, workers who did 22 MR. STILL: **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS

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1	the	things	that	I've	done.

2	CHAIR ZIEMER: I think we have
3	several now. Yes, we do have workers onboard,
4	but thank you for that input.
5	MR. STILL: Thank you.
6	CHAIR ZIEMER: Yes, appreciate
7	that. Okay. Looks like maybe two people
8	here. Jim and Roxanne Bush?
9	MR. BUSH: Good evening. I'm Jim
10	Bush. I didn't work at SRP, but I'm on behalf
11	of my [Identifying Information]. He worked
12	out there over 20-some years. Back when he
13	started, back during `51, on up until he
14	retired, but now he come down - he didn't come
15	down with cancer. He come down with this
16	[Identifying Information], a rare form of a
17	[Identifying Information] in the head. And
18	[Identifying Information] did not have that
19	when he started out there, but during his
20	period of time of working, eventually he
21	contracted that [Identifying Information] in
22	his head. And I've seen it where it was so

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1 bad where he couldn't stand for the wind, or 2 the four seasons. Winter gave him problems, summer, spring, fall. He had to cover his 3 face up with an old skull cap to go out into 4 the weather. And later on in the years past, 5 he had an operation which was a 50/50, either 6 7 live or die. So he had come to the conclusion that the pain was so severe, that the doctor 8 told us that the pain was so severe of a man 9 10 or anyone having that [Identifying Information] was more than a woman having a 11 He said he wouldn't wish that on his 12 baby. 13 So [Identifying Information] worst enemy. gave up and said, "well, just go ahead and 14 15 give me the operation." Well, the operation 16 did come out successful, but then they had to take and operate on him without an anesthesia 17 because he could not stand for the doctor to 18 19 inject him with the needle. So he had to go up into his head, over into his skull, into 20 that nerve and clip it. And so that was the 21 only thing that helped him. 22

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1	But now [Identifying Information]
2	did come a lot of days that he was
3	contaminated, but when I went and got all my
4	paperwork and everything, it was sent off to
5	Washington and Jacksonville and everywhere
6	else that it, you know, should go. But each
7	time it comes to a deadlock that they want to
8	say [Identifying Information] was not caused
9	in any way through working at SRP. And so I
10	did all I could do, you know, and I got all
11	paperwork, whatever was on his behalf, of
12	records but now to me I feel like it did,
13	SRP created and caused his problem, because he
14	wasn't having that problem until he started
15	working out there. And he was, and I feel
16	like if you being contaminated at certain
17	points in your life, then there you are going
18	to have problems from contamination. And
19	that's the way I feel about it, but now the
20	only thing I could do is do whatever I can,
21	and I felt like I've done my share, you know,
22	of getting all records, and I've turned them

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in. And I've been to most all of the meetings that would occur, you know, of having something to do with the litigation problem at the SRP. And so that's why I come out tonight, to state my opinion as well. And I thank you all.

CHAIR ZIEMER: Thank you very much. And Alice Frame. Alice.

I'm from Charleston, 9 MS. FRAME: 10 West Virginia. I've driven about every time down here to the meetings. I thank you. 11 My [Identifying Information] was an electrician. 12 He worked out there in `86 and `87. He was 13 diagnosed with [Identifying Information] 1992. 14 15 had taken radiation and chemotherapy. We NIOSH tried to say that the [Identifying 16 Information] from 25 radiation 17 came Well, I've fought against you 18 treatments. 19 long enough that you've came back and said it was not medical induced. So November 4 of 20 started to Washington, D.C. Cancer 21 1999 we [Identifying Information] was 22 Center. our

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1 oncologist, and he's a specialist in sarcoma. 2 And he's the tenth rated doctor in the nation. He's written 56 books, and it's transcribed 3 4 in seven languages. So we started chemo November 17. His leg broke and he was put in 5 a full body cast. To make a long story short, 6 7 January 28 they [Identifying Information] up to his waist. 8

You know, there's not nuclear waste 9 10 in West Virginia. And I've wrote to my congressmen and my senators. If I was a coal 11 multitudes would have gotten 12 miner, Ι of 13 Our hospital bill in D.C. from money. November till April was \$333,000. 14 I went to 15 Department of Labor in D.C. April 7 for my 16 hearing. Everybody is kind of bashing NIOSH, but I have found out when my papers come from 17 Department of Energy to NIOSH, doesn't it, my 18 19 records? Isn't that right, Department of Labor, that's how you get them? Okay, I got 20 my papers from Savannah River site. It said 21 "work history, inaccurate." Now, if there's a 22

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1	record inaccurate, then how did you get it?
2	See what I'm saying? Then I got into when I
3	went to my hearing the little girl was very,
4	very uneducated. I asked her my first name,
5	"Do you have a dosimetry badge?" "Oh, it'll
6	take a few minutes." I said, "I have all
7	day." "It'll take a few minutes." "I have
8	all day." I said, "You don't have it and I
9	know you don't have it." I asked for a badge
10	number and a badge. I have not yet to get it.
11	So then I have got into dealing
12	with Jacksonville, and I got it from one of
12 13	with Jacksonville, and I got it from one of their papers. It come back, "We do not know
13	their papers. It come back, "We do not know
13 14	their papers. It come back, "We do not know how to make this decision on PoC." I'm going
13 14 15	their papers. It come back, "We do not know how to make this decision on PoC." I'm going to give it the shotgun effect for my decision.
13 14 15 16	their papers. It come back, "We do not know how to make this decision on PoC." I'm going to give it the shotgun effect for my decision. It'll only change the cause so much
13 14 15 16 17	their papers. It come back, "We do not know how to make this decision on PoC." I'm going to give it the shotgun effect for my decision. It'll only change the cause so much percentage. This is my [Identifying
13 14 15 16 17 18	their papers. It come back, "We do not know how to make this decision on PoC." I'm going to give it the shotgun effect for my decision. It'll only change the cause so much percentage. This is my [Identifying Information] life that they're going to
13 14 15 16 17 18 19	their papers. It come back, "We do not know how to make this decision on PoC." I'm going to give it the shotgun effect for my decision. It'll only change the cause so much percentage. This is my [Identifying Information] life that they're going to shotgun effect with? So it's not all just

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1 is, what's an MPH?" They hung up on me. Ι 2 called back and I said, "Just tell me, you know, what is it?" Well, they hung up and I 3 "It's occupational medicine." 4 called back. Ι said, "Well, I'm from West Virginia, but I 5 don't think it starts with an M and an O." So 6 7 what I have found out, the doctor took her decision from medical history, not medical 8 medical didn't she have the 9 record. Why 10 record and not medical history? Then I came back and asked. They paid her \$830 for 2.5 11 units to do this twice? Is this why I don't 12 13 have money to be compensated for? See, it's not all about NIOSH. You do your job, let the 14 rest of them come up and do their job. 15 So when I went to my hearing in D.C. I asked 16 "Ι somebody with 17 them, want the same credentials that his doctor had in D.C. to 18 19 make my decision. And I don't feel like I'm asking a lot." 20 But a lot of these people don't 21 know, I went to my Congress and I now have an 22

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The Congress passed a law October 1 attorney. 2 of 2000. It states -- do you know what it It says if you get an attorney before 3 states? 4 you're denied, your attorney is fined \$5,000. And this attorney can only take from what, 2 5 to 10 percent? There's not a lawyer in the 6 7 world that's going to take. But I have a couple of good people that has agreed to take 8 Then my paper came back, and I can't 9 mine. 10 understand. Ιt says-the NIOSH dose reconstruction says he got the majority of it 11 working here, but he didn't get enough of it. 12 13 What is enough of it to [Identifying Information] at 49 years old? Like I said, he 14 15 didn't work anywhere else. And when he worked at Savannah River site, he was an electrician. 16 He got a letter from DuPont where he run 17 cable tray, and he had done that good a job. 18 19 I tried to find it, but I couldn't find it at My understanding is they use a 20 the time. drill, you know, screwdrivers. 21 They were contaminated. They put them in plastic bags. 22

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They put them in the bin that day and they were disposed. If that tool is disposed, what causes that body can't be disposed? And I have a paper I'd like to pass out to you. Could I, please? Thank you.

6 CHAIR ZIEMER: Alice, do you have 7 additional comments? Do you have additional 8 comments?

9 MS. FRAME: No, I'm through. I 10 thank you.

11 CHAIR ZIEMER: Okay, thank you for 12 sharing that with us. Robert Young? Robert 13 Young? Wayne Knox? Mr. Knox.

MR. KNOX: My name is Wayne Knox. 14 15 I've been around this industry for many, many 16 I started in the Air Force years. as а captain there as a radiation physicist, and I 17 also worked up the street here in Nuclear 18 19 Medicine Science at Eisenhower Hospital. I also spent some time supporting the Nuclear 20 Regulatory Commission. I have a contract with 21 them for over 15 years, where I provided 22

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1 support to them in regulatory development and 2 compliance, and as a result of that I've audited over 75 percent of U.S. reactors. 3 4 I've had contracts with the Department of Energy, and I have worked on the DOE Tiger 5 Team. Not only have I done more of the high-6 7 level work, but I have actually worked as an operational health physicist, and I'd like to 8 make a distinction here. There is a big 9 10 difference between an operational health physicist than an academic or a researcher. 11 We're the guys that get the job done in spite 12 13 of all of the elegant models, all of the nicely worded procedure. We have to get it 14 15 done, and а number of other people have 16 reported that our job was to get it done at all costs. It was not whether we were going 17 to wait and get the job done when we could 18 19 conveniently do it. It was it had to be done and we got it done, minimizing exposure as 20 best we could. 21

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In 1997 a colleague of mine, a PhD

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1 type, made the claim that you could 2 accurately accurately, calculate and reconstruct this dose. And I said, "Well hold 3 4 it man, what are you talking about? Do you understand" - and he came from my same school 5 too, a little school on Tenth Avenue. He said 6 7 that he could do it, and I said, "Do you understand what `accuracy' means? Accuracy is 8 how close you come to the true or actual 9 10 value. And hey man, you don't know the true value, can't calculate 11 or actual SO we accuracy." In the real world you also can't 12 13 even calculate precision, because we don't -this is no research project. We do not make 14 Any measurement of 15 repeated measurements. precision requires repeated repetitive 16 17 measurements. Any measurement of competence level requires repeated measurements. 18 We 19 didn't do that, and one of the fundamental reasons didn't all of 20 we make these measurements -- the more measurements you take, 21 the more exposures you've got. And we were 22

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1	trying to minimize exposure. So we didn't
2	make all of those measurements you guys think
3	we did. So the bottom line is, if we look at
4	the definition, any system of measurement, any
5	system of measurement that does not have
6	accuracy, does not have precision, is defined
7	as invalid. So everything we did was invalid.
8	I will make that statement. I walked away
9	from that meeting after giving CDC a lot of
10	examples of why we couldn't do this thing that
11	they said. But yet and still, they proceeded
12	to do it.
13	It disturbs me quite a bit when I
14	see that people have gone on and attempted to
15	spend all of this time and money constructing
16	IREP and all of these elegant models in order
17	to determine something which we did routinely.
18	We calculated risk. All of the risk data is
19	there, internationally accepted. I have
20	manually gone through and made several
21	
	calculations using several different methods,

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1 day. And based upon my independent 2 calculation with a pencil, I come up with probabilities of causation greater than what 3 4 was specified by IREP. And it turns out, and I've been talking to people about IREP. 5 Ι pinged it. I put in data to see, how does it 6 7 respond when you give it a certain set of data? And I haven't figured it out. I called 8 and said, "How does this thing work? 9 Have you 10 quys ever conducted а validation and verification of this thing?" And the answer 11 I find it verv This is standard. 12 is no. 13 difficult to believe that in this day and age no one has conducted an independent validation 14 15 and verification of that thing called IREP. What further disturbs me is that we have a 16 regulation that defines the Probability of 17 Causation. It's done in terms of base risk 18 19 and rad risk. Ι can get the cancer statistics, which I did, to pull up my base 20 I can drill all the way down to the 21 risk. county level and determine a person's base 22

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1 risk. I can determine a person's rad risk based upon already accepted methods of doing 2 it and risk of dose conversion coefficients. 3 But we have this method which I was told, and 4 I said, "Wait, wait, are you really telling me 5 They said, "Well, we used assigned that?" 6 7 share, and assigned share is the same as - is the same as the Probability of Causation." 8 And I said, "Well, if you already have a term 9 10 defined, why do you define another term and say it's the same?" It is not the same. 11 And it bothers me when I look at a report. 12 This 13 is a report on the Probability of Causation of an individual by name. It has the name, a 14 But then I look into IREP. 15 human name. IREP does not. Ιt does not calculate the 16 individual's assigned share. 17 It does not calculate the Probability of Causation, 18 and 19 that is what the regulation requires. And in fact, this is what you say in here. 20 In the report, you do not say "This is the assigned 21 You say it is the Probability of 22 share."

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1	Causation, and it's not. Is that true?
2	CHAIR ZIEMER: The way it's defined
3	in the regulation it is the Probability of
4	Causation.
5	MR. KNOX: Sir, are you saying the
6	Probability of Causation is the same as the
7	assigned share?
8	CHAIR ZIEMER: I believe, if I
9	recall and this is in the NIOSH document, we
10	could look at it. NIOSH pointed out the
11	technical difference in the terms, but we'd
12	probably have to have Jim Neton answer that
13	directly. But we can talk, we can discuss
14	that with you. I don't think we should have a
15	discussion here, but I understand what you're
16	saying.
17	MR. KNOX: And all due respect,
18	sir, we're playing with words. We're saying
19	that - if they're saying that they are
20	technical differences, come on. It's not the
21	same. The regulation requires the calculation
22	of the Probability of Causation. You report
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Probability of Causation. You report, this is the individual's Probability of Causation by name, and it's clearly not.

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A number of people - we're getting 4 on another subject - a number of people talked 5 about what really goes on in the real world. 6 7 And trust me, I have been there, I have lived it, I understand what they were talking about 8 with the badges falsification of 9 and 10 documentation. Ι have been since 1998 attempting to process the situation. I will 11 try to be very brief with you. I was doing a 12 13 job Savannah River. I've worked at at Savannah River, I've worked at Hanford, so I 14 15 understand what goes on in the dirty-hands world. If you looked at the data, you have 16 liquid phase of 17 tritium in the а large underground storage tank, but no tritium in 18 19 the sludge phase. And I said, "Whoa. I'm a 20 technician now. Us technicians, we sense things. We may not know how to calculate it, 21 but we can say that doesn't look right, that 22

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1 doesn't smell right." I challenged them on 2 it. Look, why isn't there tritium in the sludge, and by the way, the sludge is what we 3 had to mix up and come in contact with it. 4 They said, "It's not there. You prove it's 5 there, because we have an 800-page report from 6 7 SAIC that said no tritium in the sludge, a validation and verification report." And I 8 said, "Okay. Well, what about these plutonium 9 10 numbers? It looks like we have more plutonium in the liquid phase than in the solid phase." 11 Again, a technician looks at this and he 12 13 says, "Well, you know, most of the time you have more plutonium in the dirt than in the--14 15 it's just normal. That's the way it is." But 16 it turns out if you were to switch the numbers, then you could burn the sludge up at 17 Oak Ridge. We burned them in the incinerator 18 19 up at Oak Ridge. I went on and performed the job under protest. None of our people had any 20 protection from tritium. No monitoring of 21 They would not provide it, even tritium. 22

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though a health physicist said we needed to 1 2 use it. I clearly said it, I documented it, we needed to do it. They refused because I 3 had no proof of it. After I finished the job, 4 I said, "That's okay." I took my samples and I 5 split it, one going to Westinghouse and one 6 7 going to a laboratory. When I did that, they said, "Your job is through." They would not 8 allow me to have access to the sludge. 9 They 10 would not allow me to have access to the final report. I had to go through the Freedom of 11 Information 12 Act in order qet this to 13 information. After I got the information it did turn out that that was tritium in the 14 15 I think everybody knew that. sludge. I'm 16 sure most of you know that rule. That was tritium in the sludge. I got the data, and I 17 found out that the split sample I gave to 18 19 Westinghouse couple of orders of was а magnitude below that which was performed in 20 the laboratory. And I dug around and found 21 why. what happened? 22 out And guess Α

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talked about liquid scintillation 1 qentleman 2 counting. It's sounds nice and elegant, but most people use simply the analysis results 3 and the errors associated with the analysis. 4 They do not consider the errors associated 5 with the preparation of the sample or the 6 7 sampling. I have seen people that will perform criticality analysis without, without 8 considering the sampling error. And 9 the 10 sampling error is the largest possible error you're going to find. And most of the time 11 it's just one or two samples. 12 So you can't 13 determine precision, and you can't develop these nice little confidence intervals. 14

15 getting back to Anyway, the 16 tritium, what Westinghouse does here -- and I have the data. It took me a year and even 17 going through - having to appeal it under the 18 19 Freedom of Information Act, but I have the data, and I will share it with this committee 20 and anyone else where it is a tritium -21 preparation method that Westinghouse used here 22

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1 to boil off the tritium. So, yes, you could 2 use the liquid scintillation, but you boil it off first. So afterward, it ain't there. And 3 it happened in - I did a little more research. 4 1996 they sent I did a little more research. 5 a shipment up to Oak Ridge. 6 7 CHAIR ZIEMER: Please go back to the mic. You need to wind it up, also. 8 9 MR. KNOX: Okay. Anyway, the 10 bottom line is that there are methods that are underestimate the used that amount of 11 radioactive and hazardous waste at Savannah 12 13 River. I have the data. I can show you. It's not only that, but it's also hazardous 14 15 If you look at how they do PCB, you waste. 16 have five species of PCBs roughly, and what they will do is sample for one of them. And I 17 had to tell them, "You have to sample each one 18 19 of these guys and then you add them up. 20 That's your total PCBs. It's not, `I'll the one that's the lowest level.'" 21 choose Again, there are a lot of other problems at 22

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River. 1 Savannah Ι have all of the 2 documentation. I have reported this to the Department of Energy IG and guess what? 3 They 4 take vour data and they gave it to Westinghouse and said, "Well, why don't you 5 conduct a self-investigation of this and write 6 7 the report in the name of the Department of Energy IG?" And that's what they did. 8 They wrote a confidential non-releasable report in 9 10 the name of the Department of Energy IG, and in violation of Part 1013 which requires -11 which requires a GS-15 or above to conduct the 12 13 investigation. So in summary, the things you heard that many people talked about are true. 14 15 I will certify that. 16 CHAIR ZIEMER: Thank you. 17 MR. KNOX: And one other parting shot. There dose 18 are no experts on 19 reconstruction. There only varying are degrees of ignorance. 20 CHAIR ZIEMER: Thank you. 21 22 (Applause.) **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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1CHAIR ZIEMER: Next, John Hall. Is2John here? Thank you.

MR. HALL: How are you doing? I'm 3 I'm an iron worker. 4 John Hall. I'm one of the ones Harry Carver told you about. 5 Three months ago I had a full head of hair, healthy 6 7 as a horse. Never thought I'd have cancer. Never had cancer in my family. I worked at 8 SRS for 14 years. Even worked a year at the 9 10 Nevada test site. A lot of things that you hear these people telling you are true. 11 I've 12 worked in areas, were exposed to things, and 13 never were told what it was. I was exposed to a release from H area. I was working in S 14 I got real sick afterward. 15 They never area. did tell me what was wrong, what I was exposed 16 Again in F area, at lab when the stack 17 to. spewed, worked right there around the clock. 18 19 They never did tell us what we were exposed Worked in the burial ground. 20 to. There was nothing but a chain link fence between me and 21 high-level radiation storage. Worked there 22

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1 for two months. Questioned the people at the 2 burial ground about a TLD. "You don't need You don't need it." Finally a DOE man 3 it. I asked him. 4 came over. It was about a week me and my crew all had TLD badges. 5 later, Explain to me why they determined we didn't 6 7 need it, but then when DOE got involved in it, we needed them. 8 There's a lot of stuff that went on 9

10 out there that you could find out more information about it by talking to the workers 11 12 out there than you can talking to the 13 supervisors, because they're going to tell you what you want to hear, or what they want you 14 15 to know, not what actually happens. If you 16 went out there and interviewed the workers you'd find out more information than you will 17 by talking to them. And hiring another 18 19 contractor, that's just another waste of money for them to go out there and talk to the same 20 people that you have already talked to. 21

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Now, myself -- you just don't know

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1 how it is to get cancer. I never thought that 2 I would have cancer and you don't know how devastating it is. And I hope it doesn't 3 4 happen to nobody else. But it just - there's a lot of things that you people need to listen 5 6 to than to just the higher-ups out there that 7 try to cover up. Okay? CHAIR ZIEMER: Thank you. 8 MR. HALL: Thank you. 9 10 CHAIR ZIEMER: Wayne -is it Boyce? Wayne Boyce? 11 MR. KNOX: Let me ask another quick 12 13 question. Who could I get to to show the real data? This is live data. On the tritium, the 14 15 plutonium, the PCBs. I have the data. Ι 16 would like to know who I can show it to. Well, Larry, maybe 17 CHAIR ZIEMER: you can direct him. Larry Elliott will give 18 19 you someone. Is it Wayne Boyce? B-O-Y-C-E? Thank you, Wayne. 20 MR. BOYCE: My name's Wayne Boyce. 21 22 I'm an electrician. I have just two things **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

1 to make comments on. In the late `70s I was 2 221 working in Η, was caught in an air while operations packaging 3 reversal was 4 plutonium. They evacuated the building, brought construction workers back in later for 5 nasal smears and I had plutonium in one of my 6 7 nostrils. There were two HPinspectors involved and an HP supervisor. 8 They did the nasal smears, put them in the count rate meter 9 10 and say well you got it in one nostril. They smeared some more, well we got it out, and 11 that was the end of it. You know, naive, you 12 13 don't think much about it at all. The HP inspector that was his area where the incident 14 15 happened, he starts entering it into his log 16 book, daily log book that they kept. Supervisor got real irate and started raising 17 pure - just showing out. He didn't want that 18 19 looking bad on his shift, looking bad on him. They had a pretty heated argument. 20 Anyway, it got entered into the log book. 21 Several months later the HP inspector that logged it 22

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1 in, he had been to summer camp. He was in the Guard or the Reserve or whatever. 2 He came to our shack first - before starting to work on 3 Monday morning and told me he needed to see 4 Took me up to his desk. You could see 5 me. where a crow bar, they'd broke in and stolen 6 7 the log book. That was under old DuPont culture. 8

later when the health 9 Years 10 screening started I went through the screening and came back a beryllium sensitized which in 11 part of the Cleveland Clinic obstructed lung 12 13 due to welding fumes. And they had a doctor in Augusta I was sent to. He was following 14 15 Ιt progressed far enough for it. the establishment of the percentage of disability 16 or impairment. Can't get a doctor to touch 17 it. So now I've expired. I went past my 18 19 limit. Now I got a letter just a few weeks 20 ago I think, in two years you can apply again, but I'm starting to hear now, I don't - there 21 are very few people out there anymore that's 22

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been involved in this, but I've heard twice 1 2 tonight in the lobby that this is the standard pattern, that when it comes time to establish 3 4 your degree of impairment. In fact, the doctor, the office manager of the one I was 5 dealing with were rude and obnoxious to me. 6 7 They told me they weren't going to be involved So I think that's something that 8 in that. might need to be looked into. I can't keep up 9 10 - I keep all the letters, and the best I can make out that last letter it'll be two years 11 before you can reapply. And that's about all, 12 13 that's all I've got. Thank you. CHAIR ZIEMER: Thank you very much. 14 15 Sidney Jones? MR. JONES: Thank you for giving me 16 My name is Sidney Jones. 17 the time. I'm a local attorney. I'm licensed in South 18 19 Carolina and Georgia. And I got involved in this situation sort of when a family member 20 developed cancer, and they understood the 21 compensation under Program B, and later E that 22

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1 used to be D, and it sort of got convoluted at 2 So I got involved with it because the times. first one - I've got numerous clients now that 3 4 are trying to get their compensation under like 5 this program, and it seemed it's а 6 standard operating procedure to denv 7 everybody. The ones I've gotten, I'm going to share three cases with you which I'll try to 8 be brief and real paraphrase it, but 9 the 10 information I'm gathering is, like you alluded Mr. Ziemer to the radiation exposure from the 11 Japanese, you know, being 60 or 70 years ago, 12 we're still under the same conclusion that we 13 know how much radiation it takes to don't 14 15 People can cause cancer. say there's а 16 probability or propensity or anything we want to, but the scientists will admit we don't 17 It could be a very small dose for one 18 know. 19 person, a large dose for another. We have Japanese that were close to ground zero that 20 never developed cancer. We had some miles 21 away that did. So they don't know. 22 But the

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clients I've got are very unique in that I 1 2 look at some of them and the first one I'll with lady had 3 share you, has eight а 4 operations for skin cancer, very deep lesions and all of them were below her knees. 5 Nowhere else on her body. Developing her scope of 6 7 work, the only radiation exposure she had was feet. She below her 8 was on assembly/disassembly. All the radiation, the 9 10 corona of radiation source much like a space The closer you get to it, the more 11 heater. So as Mr. Spock said on Star Trek, 12 you get. 13 it's just not logical that we've got a lady with eight surgeries below her knees, 14 the 15 radiation source was below her feet, but NIOSH 16 says that a 7 percent probability that it caused. 17

18 I've got another lady with colon 19 cancer. The propensity for a statistical 20 inference drawn on that per capita is less 21 than 1 percent for her age to have colon 22 cancer. In her group of 60, there are 12

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The numbers are off the 1 people with cancer. 2 chart when it relates to the per capita people that should get cancer. I've got another one 3 The ORA Medical Board 4 with thyroid cancer. said the probabilities 5 are that radiation caused your cancer. They gave her a 42 6 7 percent probability SO she didn't get compensation. We are appealing it and they 8 say we've got all the data, but I presented 9 10 them two of her dosimeters that I've got in my office that they never had to analyze to 11 review, so there's no way. 12

started doing 13 So Ι research my again and found out that when NIOSH first 14 15 started this reconstruction there were over 9,000 boxes of old exposure data that was to 16 be reviewed and entered in to draw 17 these conclusions as to what the statistics would 18 19 be. They had a computer-generated program selected less than 200 of these 9,000 20 that boxes that they used to construct the data. 21 If you're doing an analogy on apples from 22

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1 Washington and you take a sample, you can sort 2 of determine what the average size is, but to draw a statistical inference there's go to be 3 some sort of relationship to what goes on. 4 5 Well, radiation exposure, there is none. Every one of them is unique. I've sent in 6 7 numerous affidavits from people where the self-reading dosimeters that these people 8 carried with them - they called them "pencils" 9 10 - that the HP people would show them how to reset them to zero so that they would not have 11 to record the data. I've had affidavits where 12 13 they say if you drop one of them it'll automatically set to zero. The NIOSH way of 14 15 doing things based on the dose reconstruction 16 is just, it's just so full of fallacies it can't be anything of substance that can deny 17 these people the compensation they need. 18 19 Here's my rule. If they can show that they radiation 20 were exposed to they deserve compensation. They've got cancer, they were 21 exposed because no one knows how much it takes 22

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1	and no one knows what cancer is like except
2	those people that got it. I don't have it.
3	I'm representing people that do. We haven't
4	got into court yet. I'm hoping that we never
5	have to. Pay them. You can pay Wall Street
6	\$700 billion but you can't pay these people
7	that's got cancer the benefits that they
8	deserve? Something's wrong with the system
9	and it's up to you to decide to change it.
10	And anything I can do to help, let me know.
11	Thank you.
12	(Applause.)
13	CHAIR ZIEMER: I don't think we're
14	going to take on Wall Street, but we'll leave
15	that up to the attorneys here I think. Thank
16	you Sidney for that. Now I'm going to go to
17	the phone lines. Is there anyone on the phone
18	line that wishes to address - representing,
19	from the local site here at Savannah River
20	that wishes to speak? Hello?
21	MR. FUNK: Dr. Ziemer?
22	CHAIR ZIEMER: Yes.
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1	MR. FUNK: This is John Funk. Is
2	any time left?
3	CHAIR ZIEMER: Yes. I want to see,
4	John, if we first have any comments from
5	others representing the local site here. Hang
6	on just a moment, would you please?
7	MR. FUNK: Okay.
8	CHAIR ZIEMER: Anyone on the line
9	that wishes to speak for Savannah River - from
10	Savannah River? Okay. And I have another
11	individual in the room here that has a comment
12	perhaps. Yes, we have one more person here I
13	think. Please come to the mic and you can
14	identify yourself or not as you wish.
15	MR. DAVIS: Good evening. My name
16	is Dan Lee Davis.
17	CHAIR ZIEMER: Haynes?
18	MR. DAVIS: My name is Dan Lee
19	Davis.
20	CHAIR ZIEMER: Dan Lee Davis.
21	MR. DAVIS: Right.
22	CHAIR ZIEMER: Thank you.
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1 MR. DAVIS: I worked at Savannah 2 River site 43 and a half years and I went there in `51 when they first started breaking 3 4 soil. I was there and I stayed there 43 and a 5 half years. And you can name it, the place, I've been there. So I can tell you all I've 6 7 been to the mountain. I was a worker, was a common laborer. I did all the dirty stuff, 8 I went in some places, I put on two 9 name it. 10 pair of coveralls and a lead suit. Have you ever known what a lead suit is? Had a lead 11 fresh air 12 suit on and there's no passed 13 through over that. I mean, I was doing my job, see what I mean? And back in those days 14 15 times weren't allowed to ask and we no questions. If there's a question you get writ 16 up or out the game. You do it how you're told 17 to do it and they have a sign on the wall 18 19 there say keep your mouth zipped up. You leaving, you leave it here. 20 Well, most of them I went with they're gone, they're dead. 21 The Lord just let me live a little bit more 22

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1 longer, probably he got something else for 2 this old boy to do, so I'm trying to do it. I'm letting you all know where we came from. 3 We went through the mill out there, everybody. 4 Everybody had to keep their mouth closed. We 5 couldn't first call home sometime. I couldn't 6 tell my wife or, you know. I tell her I work 7 at the site and that's all. So I don't know 8 if any of you brothers in here are with me or 9 10 what. Those of you all were not there, so I Yes, Ι had 11 from my stance. cancer too, and right now 12 prostate cancer, I'm on four 13 doctors trying to stay alive, trying to do the best I can. And like I said now, about the 14 tritium and stuff, anything that you can't 15 16 smell it, taste it, feel it, you don't know I have plenty of time. 17 what you get. I went to Savannah twice. They even let me strip, 18 19 put on a little suit, you know, like a doctor. I got up under these big lights. 20 I went up there twice in less than two months time. 21 In the end they told me nothing. Said well, 22

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1 that's something you got way back. Why they 2 send me up there twice, up under them big old lights, turn me all over and what? Back in 3 4 those days I wasn't allowed to tell anything. We weren't allowed to tell nothing. So right 5 now some of you all that's - the table done 6 7 set for you all. You all can sit and pick and eat what they want to eat. When I was coming 8 up the table wasn't set. We had to set it 9 10 down there at SRS. And as I said, thank God just to let me live a few more days where I 11 can tell you all, probably some of you all 12 13 never went down there, just heard about it. big place, big place in America 14 It was а born and raised down there. 15 because Ι was 16 That was my home and I still have nightmares. I don't know. Like the cancer, I don't know 17 where it goes, but right now the way I feel, I 18 19 feel like I'm walking on the clock. I feel like, hey, that's where I've been. 20 So brother and sister, I'm sorry to 21

tell you all we is blessed in some ways now

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1 because back in the old days and time we were 2 fighting war and what his name, Khrushchev, he came over here. You all remember when he put 3 his Sputnik in the air and scared the heck out 4 of America. I don't know whether you all know 5 it or not. The first Sputnik was in the air 6 7 was done by Russia. It flew overhead and it scared us. And hey, like I said, we were for 8 the first time checking out the country. 9 We 10 didn't had no war here. Rest of the place didn't in this 11 have a war, war country. Bobby, we took a lot of stuff on ourselves, 12 13 went down to SRS. Like the man said, dropped the pencil and all that stuff. That's true. 14 15 Because I was there. It wasn't a place I went 16 in down there. Expecting to get hot. See, I was construction and anytime we wanted 17 to repair something, construction had to go in 18 19 there and repair it. Because they'd say you want to repair this building here. 20 We'd do That's how we had to do. We had to go in 21 it. there and clean it up, wash it up and put on 22

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1 just what they said to put on. We didn't know 2 what we were in. And asbestos. I used to play with asbestos like I played with a 3 We didn't know what was going on back 4 marble. in those days and time. What I found out was 5 wrong when the cancer - Big Horse - you know, 6 7 when Biq Horse died with cancer, with asbestos, that's when SRS opened my eyes up. 8 All the rest of them days, we didn't pay no 9 10 attention to no asbestos. That's just like I'm putting on a jacket. Like lead. I used 11 to just play with it. Never thought it would 12 13 hurt us. So I'm just giving you all some of the - where I come from. I come from, I'm 14 15 blessed to be living because all my coworkers, they're gone. Thank you. 16 Thank you very much. 17 CHAIR ZIEMER:

Anyone else here in the assembly that has a comment? Yes, sir. John Funk on the line. We may need to pick you up tomorrow. I think you're going to be back with us, right? We have a couple more here locally that wish to

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1 speak. Go ahead, sir.

2	MR. YOUNG: How are you? My name
3	is Robert Young and I worked for Wackenhut
4	Security at SRS. I worked out there for 24
5	years. I can validate a lot of these stories.
6	I've had a lot of them myself. When I first
7	started out there we played in our reactor
8	hide and go seek many a nights while we were
9	out there. I've been in all the areas because
10	I had to have knowledge of all the areas, all
11	the time, and I filed - I had lung cancer. I
12	have only one lung and I no longer can keep up
13	my standards to carry a weapon so I had to
14	retire this year. But, I've been out there
15	long enough and the TLD badges and all that,
16	there's no way that they can reconstruct where
17	all I've been and say no. Because my TLD came
18	back every month no matter where I was or what
19	I was doing, 0.001. And I could talk to 30
20	other Wackenhutters, same thing, 0.001, for 24
21	years.

So I've filed already and I've had

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an interview and I'm only up to 13 percent 1 2 saying that it was probable cause that it was out there. But nobody else in my family has 3 ever had cancer. I'm the first one and it was 4 small cell cancer, squamous cell. 5 I don't know if that's one of them out there or not. 6 7 But that's my two cents. CHAIR ZIEMER: Okay, thank you sir. 8 MR. YOUNG: Thank you. 9 10 CHAIR ZIEMER: And there was one other person? Yes, sir. Please, approach the 11 mic. 12 13 MR. OVERCASH: I hadn't planned to say anything tonight. I was just going to 14 15 listen. 16 CHAIR ZIEMER: Give us your name and then we'll -17 MR. OVERCASH: Oh, Karl Overcash. 18 19 CHAIR ZIEMER: O-V-E-R? MR. OVERCASH: 20 C-A-S-H. CHAIR ZIEMER: Overcash, thank you. 21 That was before I MR. OVERCASH: 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

330 1 developed cancer. Now it's Undercash. 2 CHAIR ZIEMER: Yes, Undercash. Karl with a C or a K? 3 MR. OVERCASH: With a K. 4 CHAIR ZIEMER: With a K. 5 MR. OVERCASH: Okay. 6 7 CHAIR ZIEMER: For our court 8 reporter. MR. OVERCASH: Okay. I spent 40 9 10 years with DuPont, four and a half years with the Westinghouse, then I spent another two 11 years with Ebasco engineers consultant working 12 13 at the Savannah River plant. Ninety percent of my time was spent in SRL. I worked in the 14 tritium facility for a year. 15 I worked when I 16 first went there for a year till I could get 23 my clearance because after 23 years -17 months in the military and being discharged, 18 19 they could not get me clearance because I was So it took a little while to clear that dead. 20 up, but once I got it then I was transferred 21 22 to Savannah River to the laboratory and I **NEAL R. GROSS** 

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worked in research for the next 15 years.

In this period I not only did I do 2 process development work, but I actually did a 3 lot of cutting edge development work. 4 I had a wing, a whole wing that I was over, and I had 5 27 men that worked for me. We performed every 6 7 kind of hazardous job that you can think of. This was not a facility that was built for 8 this type of work, but it 9 was protected 10 individually in cells and glove boxes. Now, one of the things like the lady with the feet 11 with problems, there's nothing to tell you how 12 13 much you're getting to your feet when you're working at a glove box. How much shine is 14 15 there back to you? It's not a direct thing. 16 I also worked with the development of the californium for cancer research. My facility 17 provided over 60 percent of the radiation for 18 19 the whole SRL and they did not like me.

20 So they finally decided they were 21 going to get rid of it and they went it to Oak 22 Ridge because they didn't want to have the

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stigma of the radiation. There's no way you can protect yourself 100 percent because there's a little here, a little there, a little here, a little there.

You can't go in and clean it up. 5 It's just too hard. You have to wait on a two 6 7 and a half year half life. And everyone no matter who they are, they come in, the 8 radiation isn't that great from the neutrons, 9 10 but if you're there over a period of time you're going to pick up the radiation. 11 Now, we had very little problem with maintaining 12 13 our radiation, but we had to swap people around constantly and to be perfectly honest I 14 was the 28<sup>th</sup> member of the Work Group. 15 It had to be because of the number of people required 16 to do these jobs. So I was just, I was just 17 like the people that worked for me, really. 18 I 19 was a technician just like they were because I did all the things that they did. 20 Not quite as much as they did, but these are the things 21 that you do to get the job done. We weren't 22

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asked could we. It's just like Smith Kettering. They would call me and say I need new californium sources. When do you want them? They would tell me. I had to produce those to get them to them on time.

Now, sometimes I caught my boys 6 7 doing little things that were not kosher. Ι did not appreciate it and I didn't like it. 8 Ι told them, I said look, we can always spread 9 10 it out. Ιt would take twice as much radiation. I understood that, but still they 11 should not have done these things and picked 12 13 up an unusual amount, like you say, moving their badge. Now, this is one of the things 14 15 you had to watch for and we watched for it and 16 we tried our best. We had good health coverage. Our construction people, I had a 17 wonderful relationship with those people. 18 19 They came up and did jobs for me and they were always included. They were given the 20 same training. They had to have the same training 21 that we would have. We had to make sure that 22

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they fully understood and actually I usurped 1 2 their supervision quite often, and I had to explain this beforehand. Your supervision 3 does not understand the problems that we have. 4 I will supervise your employees. He can sit 5 I did out front. There's no problem there. 6 7 what I could. And I'm not just the only one in SRL that did this. A lot of the other 8 supervision there did the very same thing, to 9 10 try to get the job done but get it as safely as possible. 11 processed a unit there. The 12 Ι 13 first thing I did was I made slugs for the reactor area that went to Hanford - I mean to, 14 15 I think it went to Hanford. I can't remember. My mind went when I lost my hair. 16 Anyway, to another facility and 17 they worked on them, and then they sent them 18 19 back. Then I processed them again, then I They put them 20 gave them to the reactor area.

22 Ridge.

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in. When they finished, they sent them to Oak

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1 They processed them and sent me the californium-252 to make into an oxide to begin 2 with. Then we developed a wire which was much 3 because manufacturing had problems 4 simpler with having wet cells. Very expensive. 5 So we came up with a method of making wires. 6 This meant they could have a dry cell. They didn't 7 have to fool with liquid which just tickled 8 them to death. Now, we made these 9 10 wires. They were a little eighth of an inch, maybe 40 mil diameter, 30 mil, whatever they 11 We gave them exactly what they 12 asked for. 13 want with the length and the concentration. Ι also did the old snap program, the first 14 15 plutonium-238. I did that in a globe box 16 upstairs and shipped out the first four snaps. And Snap 1 was rated for 10 years and the 17 latest gentleman is still going. 18 19 All of these things that we do we did because we were asked to do it. We did it 20 to the best of our ability and I'm sure that 21 we made mistakes. I feel so sorry for the 22

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1 young people that have cancer and problems. Ι 2 have been fortunate. I had to wait until I started my second puberty. I was 81 when I 3 4 received cancer. I went through the early stages when I first started talking about it. 5 6 I went over to the doctor that they sent me to and he examined me. I walked out and when I 7 went over to this specialist four or five 8 and walked in and handed 9 months ago my 10 Medicare card, it took about three minutes. The fellow good, bye bye. that 11 You're examined me to evaluate me the first 12 time 13 years before did it faster. He looked at my eyes, he looked in my mouth and he felt my 14 15 throat, and that was all there was to it. Ι 16 did not get the type of evaluation I thought I should have gotten. I've never applied for 17 anything. I have always felt that if I needed 18 it I could go get it, but I don't believe 19 today these people are getting their 20 fair And I think this is something that we 21 share. should look into and you people have 22 an

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opportunity to eradicate the road blocks that 1 2 are put before them. And I thank you. CHAIR ZIEMER: Thank you. 3 (Applause.) 4 CHAIR ZIEMER: I did promise one 5 6 individual on the phone line that we would 7 give her an opportunity to speak today. It's Terri Barrie. And Terri, are you on the line 8 still? 9 10 (No verbal response.) Terri Barrie, are CHAIR ZIEMER: 11 you on the line? 12 (No verbal response.) 13 CHAIR ZIEMER: John Funk? 14 15 MR. FUNK: Yes, I'm here Dr. 16 Ziemer. John, are you going 17 CHAIR ZIEMER: to be able to be with us during the public 18 19 comment session tomorrow? MR. FUNK: Yes, I can. I know you 20 guys had a hard day today. 21 CHAIR ZIEMER: Well, we're past our 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

338 1 time here. If you're agreeable we'll put you 2 on tomorrow's schedule. MR. FUNK: That's fine. 3 4 CHAIR ZIEMER: Okay. Thank you, John. 5 6 MR. FUNK: Thank you, sir. 7 CHAIR ZIEMER: Let me again check with Terri Barrie to see if she's on the line. 8 Hopefully we'll check for Terri again 9 Okay. 10 tomorrow. Was there one other person? Okay. And Denise, we'll put you on tomorrow then if 11 that's agreeable? 12 13 MS. DEGARMO: That's perfectly fine. 14 15 CHAIR ZIEMER: Are you good with 16 that? MS. DEGARMO: Yes. 17 CHAIR ZIEMER: Okay. And let me 18 19 remind all of you there is another public comment session tomorrow so if any of you felt 20 like you wanted to speak but maybe weren't 21 quite ready or didn't quite have the courage 22 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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1 today, you have an opportunity tomorrow. We 2 will be meeting all day tomorrow. You're welcome to be at any of our sessions 3 as 4 exciting as they are, or as interesting as they are, but the public comment 5 session 6 tomorrow is at 7:30. It's in the evening to accommodate folks who aren't able to come 7 during the day, but you're all welcome to be 8 back here and we'll be pleased to have you 9 10 with us at that time. So we're recessed till 11 tomorrow morning. the above-entitled 12 (Whereupon, 13 matter went off the record at 6:32 p.m.) 14 15 16 17 18 19 20 **NEAL R. GROSS** COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com