

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL
NATIONAL INSTITUTE FOR OCCUPATIONAL
SAFETY AND HEALTH

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ADVISORY BOARD ON RADIATION AND
WORKER HEALTH

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LOS ALAMOS NATIONAL LABORATORY WORK GROUP
(LANL)

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TUESDAY
AUGUST 15, 2017

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The Work Group convened via teleconference at 11:00 a.m. Eastern Time, Josie Beach, Chair, presiding.

PRESENT:

JOSIE BEACH, Chair
BRADLEY P. CLAWSON, Member
JAMES E. LOCKEY, Member

ALSO PRESENT:

TED KATZ, Designated Federal Official
BOB BARTON, SC&A
TERRIE BARRIE
ANDREW EVASKOVICH, Petitioner
JOE FITZGERALD, SC&A
CHRISTOPHER MILES, ORAU
JIM NETON, DCAS
LaVON RUTHERFORD, DCAS
MUTTY SHARFI, ORAU
DAN STEMPFLEY, ORAU
JOHN STIVER, SC&A

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

(11:01 a.m.)

Welcome and Roll Call

MR. KATZ: Welcome, everyone, to the Advisory Board on Radiation and Worker Health. This is the Los Alamos National Lab Work Group. And our teleconference today deals with the latter part of the SEC. And possibly, if we have time, we'll go over and see where we are on Site Profile issues, but we may not get to that.

The agenda and materials that are going to be discussed today, including the couple of presentations, one by LaVon Rutherford, and one by Joe Fitzgerald, they're all posted on the NIOSH website. They're under program, the Board, scheduled meetings, today's date. So, anyone can go there and see the presentations.

You won't see them being presented, per se. You can just view them as the presenters do. And you can also see all the background reading documents that relate to what will be

1 discussed today.

2 And I'd also ask everyone on the line,
3 please do not, except if you're speaking to the
4 group, do not leave your phone open, but mute it.
5 And to mute it you press *6. *6 will mute it if
6 you don't have a mute button on your phone. And
7 *6 again will take you off of mute.

8 And also, please don't put the call on
9 hold at any point, because that will cause
10 problems for everyone else. But just hang up and
11 dial back in if you need to leave for a piece.

12 Okay. Now, let me just go on to roll
13 call now. And talking about a site, if you'd
14 speak to conflict of interest. The Board Members
15 are all on. None of them have conflicts.

16 The Members that we have on are our
17 Chair, Josie Beach, and Brad Clawson, Member, and
18 Jim Lockey, Member. And Wanda Munn is on this
19 Work Group, but she's not attending, she wasn't
20 expecting to attend today.

21 (Roll call.)

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1 MR. KATZ: Okay. So, again, just to
2 remind you all, please put your phones on mute.
3 And at this point I'll turn this over to Chair
4 Josie Beach. It's your meeting.

5 CHAIR BEACH: Thanks, Ted. This is
6 Josie. And just a point of clarification, Ted.
7 You mentioned there were two slide presentations,
8 and they were listed on the web. Did NIOSH, did
9 you prepare a slide presentation?

10 MR. RUTHERFORD: Yes. It should be
11 posted on the web --

12 (Simultaneous speaking.)

13 CHAIR BEACH: Because I'm looking at
14 the web right now. And I checked it earlier, and
15 it's not there, unless it could be --

16 DR. NETON: This is Jim. I checked.
17 It's there.

18 MR. KATZ: I saw it there too, Josie.

19 DR. NETON: It's a PDF file. It's not
20 a PowerPoint presentation.

21 CHAIR BEACH: How many pages is it?

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1 MR. RUTHERFORD: Thirty-two, 33
2 slides.

3 CHAIR BEACH: Okay. I got it. All
4 right. Thank you. And then, and the other thing
5 we had petitioner comments at the end. And I was
6 curious, Andrew, did you have anything prepared?
7 Or were you planning on making any comments this
8 morning? And if you're not, that's fine.

9 MR. EVASKOVICH: I don't have anything
10 prepared. But, yes, I had planned to make some
11 comments.

12 CHAIR BEACH: Okay. That's great. I
13 just wanted to make sure we get, save time for
14 that. So, thank you.

15 MR. EVASKOVICH: Thank you.

16 **NIOSH Petition Evaluation Addendum**

17 **(1995 - 2005)**

18 CHAIR BEACH: We'll go ahead and start
19 with the NIOSH SEC presentation, take questions,
20 and then move into, I know Joe's got a review of
21 the Addendum, and then additional slide

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1 presentation. So, I guess LaVon, if you're ready
2 I'll turn it over.

3 MR. RUTHERFORD: Yes. This is LaVon
4 Rutherford. Let me know if you can't hear me. I
5 do have the presentation on a computer in front
6 of me. And sometimes the phone gets a little
7 interference. So, I just want to make sure
8 everybody can hear me fine.

9 MR. KATZ: Yes. Your sound, you're
10 clear as a bell.

11 CHAIR BEACH: Yes. Great here.

12 MR. RUTHERFORD: Okay. This is LaVon
13 Rutherford. I'm going to talk about the NIOSH
14 SEC 109 Addendum. I am the Special Exposure
15 Cohort Health Physics Team Leader for NIOSH.

16 Slide 2, some background information.
17 SEC-0109 LANL petition was received in April of
18 2008, and qualified in May of that year. The
19 Class evaluated was all service support workers
20 from January 1, 1976 through December 31st, 2005.

21 The Evaluation Report was approved,

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1 Rev. 0 on January 2009. We issued Rev. 1 in
2 August of 2012. And the Addendum, which
3 addresses the remaining years, in April of this
4 year. Next slide.

5 Previous Board actions. The Board
6 took actions on adding a Class at LANL. They
7 added a Class from 1976 all the way through 1995
8 for all employees. This was actually the second
9 action taken. Currently there is an SEC Class
10 all the way through the start of operations at
11 LANL, to the end of 1995. Next slide.

12 All right. Identified infeasibility
13 included the inability to bound unmonitored
14 intakes of exotic alpha emitters, fission
15 products, activation products, tritiums,
16 especially -- specifically special tritium
17 compounds, Sr/Y-90, Th-230, and Th-232.

18 During that we committed to continue
19 to evaluate these issues for the post-1995
20 period. But we had indicated that if the site
21 was in compliance with 10 CFR 835, the issues

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1 would effectively be resolved. So, we set the
2 end date of December 31st, 1995 for the Class.
3 Next slide.

4 10 CFR 835 requires internal dosimetry
5 programs for radiological workers. Under typical
6 conditions who were likely to receive a 0.1 rem
7 or 100 millirem CEDE from all occupational
8 radionuclide intakes in a year.

9 Given this requirement, in the absence
10 of individual internal dosimetry data, and
11 assuming compliance, intake would be unlikely to
12 have resulted in a greater than 0.1 rem CEDE, and
13 the infeasibility to reconstruct dose would not
14 exist.

15 So basically, if the individuals were
16 not monitored they would have received more than
17 100 millirem. And if they were monitored, we had
18 monitoring data. And so, there is no
19 infeasibility. Next slide.

20 Since the issuance of Rev. 1 of the
21 SEC Evaluation Report, we sought and received

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1 additional information, documents, and
2 procedures relating to post-1995 use of exotic
3 radionuclides.

4 And what we found was a sporadic use
5 after 1995, meaning ultimately there's fewer
6 bioassay data points, or few bioassay data
7 points. Next slide.

8 One of the key trips we took out in
9 doing our investigation and reviews was a
10 November 2015 trip with DCAS, SC&A and ORAUT. WE
11 met with the LANL Physics Team, including
12 Managers, Dosimetrists, and field personnel, to
13 better understand how they complied with 10 CFR
14 835, or how they had achieved compliance with 10
15 CFR 835.

16 We looked at documents, a number of
17 different types of documents that were captured,
18 RWPs, respirator use, air sampling, radiation
19 surveys, HP checklists, routine monitoring
20 instructions, and external exposure data. Next
21 slide.

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1 LANL also provided us their policy and
2 procedure documents, background information on
3 835 implementation, organization charts, non-
4 routine radionuclides handled by waste
5 management, and a summary of their dosimetry
6 monitoring program.

7 LANL also provided information and
8 documents specific to special tritium compounds.
9 Next slide.

10 So, the big question is, how do we
11 assess sites during the 10 CFR 835 era? If you
12 think about it, if sites assess an operation and
13 determine that workers are unlikely to receive
14 100 millirem per year CEDE, dosimetry would not
15 be required.

16 Therefore, in many cases, especially
17 with the exotics and some of the smaller
18 projects, we have reduced personal monitoring
19 data. And this is not just for LANL. This would
20 be for all sites. Next slide.

21 So, NIOSH management had figured

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1 during the 10 CFR 835 era, if a site has a
2 Radiation Protection Program approved by DOE,
3 NIOSH will assume compliance unless documentation
4 supports otherwise.

5 NIOSH will focus their evaluations
6 during this period on internal and external
7 assessments and incident reports associated with
8 10 CFR 835. Next slide.

9 So, when we were reviewing our
10 findings, I actually had this same slide in the
11 previous LANL presentation. What we were looking
12 for is, from an SEC perspective do the findings
13 identify unmonitored exposures that may prevent
14 reconstructing exposures to a defined class of
15 workers?

16 And then, from a DR perspective, do
17 the findings identify a programmatic flaw that
18 would suggest that the unmonitored workers could
19 have received exposures in excess of 100 millirem
20 per year? Next slide.

21 Therefore, our evaluation for this

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1 Addendum looked at assessments, focusing on
2 findings, responses, and corrective actions. And
3 when I say corrective actions, I think one of
4 these things that -- and I'll get into it a little
5 later, is the corrective actions.

6 Did they take corrective actions? If,
7 first, those that were not monitored, did they
8 take corrective actions to ensure that they were
9 monitored? And I'm speaking of individuals that
10 should have been monitored.

11 And with the Nonconformance Tracking
12 System for 10 CFR 835 violations, site response
13 again, and corrective action, as well as the same
14 thing, that is an Occurrence Reporting System.
15 Next slide.

16 So, we identified May 1995 LANL
17 internal assessment of the Radiation Protection
18 Program. There was one finding associated with
19 administrative controls for sealed sources. And
20 there were five observations.

21 One, of those five observations, one

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1 associated with internal dosimetry. Observation
2 4 stated that the Radiation Protection Program
3 office has not coordinated with support
4 organizations to implement site-specific
5 document control and records management programs.

6 Problems were identified with
7 document control and distribution of updated
8 procedures. We reviewed this information. And
9 we determined that this would not affect our
10 ability, would not cause an infeasibility in dose
11 reconstruction. Nor would it affect our 100
12 millirem CEDE for a worker being monitored. Next
13 slide.

14 We went to the DOE NNSA conducted --
15 DOE NNSA conducted an independent review of the
16 internal dosimetry program at LANL in July of
17 2004.

18 The stated performance requirements
19 for the assessment included evaluation of
20 compliance with 835.702(a), which is associated
21 with record keeping of monitoring data.

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1 No findings or observations were
2 associated with 835.702(a), but there were three
3 non-compliances noted in the assessment. None of
4 the findings in the assessment would likely
5 affect our ability to perform individual dose
6 reconstructions. Next slide.

7 We also reviewed the NTS with the
8 Nonconformance Tracking System for LANL, for 10
9 CFR 835 violations, site responses, and
10 corrective actions.

11 We identified 384 reports. Ninety-
12 one were considered potentially relevant. And of
13 those 91 two were considered pertinent to
14 compliance with 10 CFR 835.702(a). And those
15 were records NC ID:652 and 1377.

16 Records, non-laboratory exposure data
17 was not included in all employee records for
18 current year or lifetime dose. In some cases,
19 when an employee's previous employer provided
20 does information it was not included in the
21 employee's current year or lifetime dose. 1377

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1 was basically the same thing. Next slide.

2 The findings for the two NTS reports
3 would not likely affect our ability to perform
4 individual dose reconstructions. When we request
5 individuals, individuals that have covered
6 employment at various sites, we request the
7 monitoring data on those individuals from each
8 site.

9 So, this situation would not have
10 prevented a problem, should not present a problem
11 for us from the dose reconstruction perspective.

12 SC&A also identified an NTS report
13 that we overlooked, you know. And I quite
14 honestly can't give you a good reason at all how
15 we missed it. Because this is probably the worst
16 one of them all.

17 The report NC ID:484 -- and we also
18 did additional review after 484 was identified by
19 SC&A. And we identified another one, 1219, were
20 reviewed using the same criteria identified
21 previously. Okay. Do we have an infeasibility?

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1 And do we potentially have a situation where
2 unmonitored workers exceeded 100 millirem? Next
3 slide.

4 NC ID:484, as identified by SC&A,
5 identified a number of deficiencies, which could
6 affect LANL's ability to ensure personnel with
7 the potential of receiving a dose great than 100
8 millirem per year CEDE were monitored
9 appropriately.

10 The site implemented a number of
11 corrective actions to the programs to ensure this
12 would not happen in the future. And those
13 corrective actions were completed by October of
14 2000.

15 However, our question was, what about
16 the individuals that should have been monitored?
17 What actions did they take during that time
18 period?

19 So, we have reached out to Los Alamos
20 for additional information, requested additional
21 information from LANL as to what the site

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1 concluded concerning the potential exposures to
2 personnel who were not monitored. We have not
3 received that information as of yet. Next slide.

4 NC ID: 1219 identified a deficiency
5 where some workers in TA-55 were not on the
6 appropriate bioassay programs. Some people were,
7 some personnel were in a less restrictive
8 bioassay.

9 And so, we had 23 of those
10 individuals. This was caused by a computer
11 software error, believe it or not, a problem with
12 the identification of the individuals. Next
13 slide.

14 The corrective actions included,
15 computer problems were corrected and tested,
16 workers were placed on the appropriate bioassay
17 program, and line managers were reminded of the
18 requirements to review dosimetry assignments for
19 their personnel.

20 NIOSH concluded, although the non-
21 compliance occurred, the corrective actions

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1 insured no personnel with the potential to
2 receive the 100 millirem were not monitored, CEDE
3 were not monitored.

4 And that's been not monitored. Should
5 have been a correction to the slide there. And
6 I'll make sure prior to the Board meeting that I
7 do correct that. Next slide.

8 Occurrence Reporting System. We
9 reviewed the Occurrence, DOE Occurrence Reporting
10 System for LANL 835 violations, in addition to
11 the Nonconformance Tracking System.

12 We identified a total, on our initial
13 review, of 159 reports. Of these 159 reports 64
14 were deemed potentially relevant. We reviewed
15 the 64 in detail and found no findings pertinent
16 to 10 CFR 835. Next slide.

17 After our initial review and put out
18 the Addendum, we were doing additional searches
19 for Sandia and other sites, and recognized that
20 the search parameters of just putting in the site
21 name would not, it was not all inclusive.

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1 And we found that you could actually
2 put in specific areas, such as TA-55, you could
3 put in the contractor's name, and actually get
4 different numbers of reports. So, after each one
5 in the Addendum we had continued our search in
6 return for reporting systems.

7 The one thing though that we have
8 found, that it, from everything that we've
9 reviewed today, we have not found a 10 CFR 835
10 violation without the NTS report. Next slide.

11 Dose Reconstruction. So, based on
12 NIOSH's review of LANL's approved Radiation
13 Program, internal and external assessments that
14 followed, NTS report findings, and Occurrence
15 Reporting reports, they concluded intakes for
16 unmonitored workers with access to controlled
17 areas were unlikely to have resulted in CEDE of
18 100 millirem per year.

19 I do want to caveat that. That we do
20 need to find out the conclusion to that
21 nonconformance report 484. Find out where that

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1 turns out. Next slide.

2 Methodologies. Bound intakes is,
3 will, bounding intake quantities corresponding to
4 100 millirem CEDE may be defined as two percent
5 of the Stochastic Annual Limit on Intake. So,
6 you'll hear me say SALI. And that's the
7 Stochastic Annual Limit on Intake.

8 And unmonitored worker can be assumed
9 exposed to two percent of SALI per year from
10 potential radionuclides. So, for purposes of
11 dose reconstruction the radionuclide and lung
12 clearance class selected for each year's intake
13 would be the one resulting in the highest dose to
14 the organ of interest. Next slide.

15 Again, that specific two percent SALI
16 nuclide mixture resulting in the highest dose to
17 the organ of interest at the time of cancer
18 diagnosis would be selected.

19 So, as an example we took a White Non-
20 Hispanic male born in 1965. He started
21 employment at LANL in January 1, 1996, ended his

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1 employment 12/31/2016, and was diagnosed with
2 cancer on 12/31/2016.

3 You can see on the next slide some of
4 the doses, the organs of concern, for example,
5 bone surface. You'll see a separation in years.
6 That was due to a change in the, ALI, I believe.

7 And Jim can correct me if I'm wrong,
8 between 2000, that was required by 10 CFR 835 in
9 1996 from 2009 and 2010 to 2016. The bone
10 surface, uranium-234, you can see these are not
11 insignificant doses that we are applying to the
12 organ.

13 When you take and convert that, you
14 see 100 millirem to an intake. And you apply
15 that intake to an organ, specific organ of
16 concern. You can see that we end up with 22
17 percent POC.

18 And you can go on down, lung. Lung
19 actually has changes in the 2010 to 2016 period,
20 determined, depending on whether it was a never
21 smoked, former smoker, or the greater than 40

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1 cigarettes per day kind of thing.

2 You can see those doses on that one.

3 So, that's our example DR I wanted to provide.

4 And I wanted to show you that these are not, you

5 know, people here, you know 100 millirem in their

6 thinking. Okay, wow, that's not much. The action

7 facing the organ is a little different Next

8 slide.

9 Special Tritium Compounds. Potential
10 dosimetric issues associated with STCs including
11 stable metal tritides and organically bound
12 tritium were not formally recognized or addressed
13 by LANL or DOE until the late 1990s.

14 In 1998 LANL issued a Dose Assessment
15 - Tritium Internal Dosimetry and Bioassay
16 Programs, which specifically addressed bioassay
17 for Special Tritium Compounds. The potential for
18 significant exposure to STCs was small. And dose
19 assessments were rarely deemed necessary. Next
20 slide.

21 Now, bioassay data specific to STCs

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1 are rare for the entire period of the evaluation.
2 However, if we had a situation where we needed to
3 determine if a worker, or we needed to
4 reconstruct the worker who was unmonitored, we
5 could try the same method.

6 We can bound unmonitored intakes of
7 STCs in the same manner as intakes of rare
8 nuclides for which internal dosimetry data is
9 lacking by assuming the intakes of an unmonitored
10 worker did not exceed two percent of the SALI.

11 And that's equivalent to two percent
12 of the SALI for tritiated water vapor. And we
13 would use dose reconstruction for intakes of
14 Special Tritium Compounds using the methodologies
15 in ORAUT-OTIB-0066. Next slide.

16 Some indication of concerns. I think
17 this is one of the biggest ones. Preliminary
18 Notice of Violation was issued on February 16th,
19 2007 to LANL.

20 The PNOV included radiological
21 protection violations for monitoring. The PNOV

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1 noted that the Office of Independent Oversight
2 2005 inspection found that LANL failed to
3 adequately establish personnel and area
4 monitoring for TA-55 hazards of neptunium and
5 radionuclides other than uranium, plutonium,
6 americium, and tritium. Next slide.

7 NIOSH reviewed LANL's responses and
8 corrective actions. We also looked at the NTS
9 reports related to LANL on that. We also looked
10 back to LANL, this was actually during some of
11 our discussions in November and follow on, in
12 November of 2015.

13 And we asked LANL for information on
14 the potential neptunium exposure. LANL indicated
15 the 100 gram quantities fell below their
16 monitoring threshold, as documented in their
17 Internal Dosimetry Technical Basis Document.

18 Subsequently, we did not require,
19 their threshold was a higher level, based on
20 their studies, and would not, not exceeding their
21 threshold did not exceed the 100 millirem CEDE.

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1 Next slide.

2 So, after reviewing all available
3 information NIOSH finds that the unmonitored
4 workers involved in these operations were
5 unlikely to have received intakes that would have
6 resulted in 100 millirem CEDE.

7 Therefore, the methodology described
8 earlier for bounding intakes for the unmonitored
9 workers is appropriate for workers involved with
10 the neptunium operations identified in this PNOV.
11 Next slide.

12 So, for the period of January 1, 1996
13 through December 31st, 2005 we find that it,
14 NIOSH has, finds that it has access to sufficient
15 information to estimate the maximum radiation
16 dose for every type of cancer for which radiation
17 doses are reconstructed, and could have been
18 incurred in plausible circumstances by any member
19 of the Class, or estimate radiation doses for
20 members of the Class more precisely than an
21 estimate of maximum dose. Next slide.

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1 And this is a slide that we provide
2 that shows the summary. Dose reconstruction is
3 feasible, all internal and external from January
4 1, 1996 to December 31st, 2005. And finally, the
5 last slide, questions. Okay.

6 CHAIR BEACH: Okay. So first, Board
7 Members, do you have any questions for LaVon?
8 Hearing none --

9 MR. KATZ: Just --

10 CHAIR BEACH: Oh, go ahead.

11 MR. KATZ: I'm curious. Someone might
12 be on mute.

13 CHAIR BEACH: Yes. I was just going
14 to ask that before --

15 MR. RUTHERFORD: This is LaVon. Can
16 you hear me?

17 MR. KATZ: Yes. Yes. There you go.

18 MEMBER LOCKEY: Jim Lockey. Can you,
19 just for, a couple of clarifications. When you
20 go back to Slide 13.

21 MR. RUTHERFORD: Okay.

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1 MEMBER LOCKEY: One of the dates where
2 the petition seems to be failing, did you see
3 that? I heard one 2002.

4 MR. RUTHERFORD: Yes. The first one
5 on 13, it was a May 1995 LANL internal assessment
6 that was done. That was, I'm hoping I got this,
7 the right slide. And then the second one was
8 that DOE NNSA was an independent review in 2004.

9 MEMBER LOCKEY: Is that when the
10 deficiency is identified, or was it before that?

11 MR. RUTHERFORD: No. It was
12 identified during that, those different
13 assessments.

14 MEMBER LOCKEY: Okay. So, it was
15 identified in '95 and 2004?

16 MR. RUTHERFORD: Right.

17 MEMBER LOCKEY: And one other
18 question. For those people that weren't
19 monitored, what was the range of exposure?

20 MR. RUTHERFORD: You know, I don't --
21 Yes. I don't recall offhand. Chris Miles, Chris

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1 Miles with ORAU. He's done a lot of the technical
2 work. He may have looked at that in the, I think
3 you're talking about the situation where, I'm
4 assuming you're talking about the situation where
5 23 of the 93 workers, that was actually in an NTS
6 report, NC ID, oh shoot, let me find it, 1219.

7 There were 23 of the 93, were not on
8 the appropriate bioassay. I'm assuming that's
9 what you're talking about. All the other
10 situations -- but first of all, I'll point out
11 that the internal and the external assessments
12 that we have reviewed, there has been no
13 indication provided to us that individuals did
14 not, individual exceeded the 100 millirem CEDE.

15 Now, that is without talking about the
16 NC ID: 484, that SC&A brought up, and we
17 overlooked. That one I still have, we still have
18 a little more homework to do on that.

19 MEMBER LOCKEY: So, for those people
20 monitored, none exceeded the 100 millirems --

21 MR. RUTHERFORD: Yes. I do not,

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1 again, I don't recall the actual values that were
2 given. I don't know, again, if, and Chris, or
3 Jim, or anybody else has anything.

4 MR. MILES: Yes. This is Chris here.
5 I don't think that report discussed the doses for
6 anybody. It was just an assessment of whether
7 they were likely to receive 100 millirem or more
8 I think.

9 They were just assessing the
10 appropriateness of the programs that they were
11 on. And they found that 23 of the people, I think
12 they looked at 99 people.

13 There were 23 of them that were on
14 less conservative programs than they should have
15 been. So, I don't think that report talks about
16 any specific intakes to anybody.

17 MR. RUTHERFORD: Yes. I didn't recall
18 reading any either. So --

19 MEMBER LOCKEY: And LaVon, you don't
20 have the intake data, or what?

21 MR. RUTHERFORD: We have, I mean, we

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1 have the intake data. We have bioassay data, a
2 spreadsheet from LANL. But we don't have the
3 specific data for these 93 individuals. We'd
4 have to go back and actually do some additional
5 research on that to see if we could identify those
6 93, and see what those values were.

7 MEMBER LOCKEY: Oh, okay.

8 MR. RUTHERFORD: Attempt to find some
9 additional information.

10 CHAIR BEACH: So, LaVon, this is
11 Josie. You said you have a spreadsheet on some
12 bioassay data for LANL? Is that correct?

13 MR. RUTHERFORD: Yes.

14 CHAIR BEACH: And what years does that
15 cover?

16 MR. RUTHERFORD: Oh, gee. Chris, I
17 can't remember the start year. Do you remember
18 the starting year?

19 MR. MILES: I think that spreadsheet
20 has all the data that we have, I believe.

21 MR. RUTHERFORD: Yes.

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1 MR. MILES: For all years, I believe.

2 MR. RUTHERFORD: Correct.

3 CHAIR BEACH: Well, I noticed in the
4 Evaluation Report, when you're mentioning how
5 many dose reconstructions you've done, how many
6 internal and external, it looks like half you
7 didn't find any internal dosimetry for them.

8 MR. RUTHERFORD: Yes. Well, if you
9 look at that, 51 percent of the personnel, these
10 are all claimants. This isn't just workers that
11 are inside radiological areas. These are all
12 claimants.

13 And you've got 51 percent. That's a
14 high number. That's not a low number, you know,
15 that's a pretty good number, 51 percent of those
16 people have internal monitoring data.

17 CHAIR BEACH: Okay. And I didn't
18 notice, it's not very specific in the DR, what
19 data you do have, what, for this time period, the
20 '96 to '95, the monitoring data.

21 MR. RUTHERFORD: You mean the '96 to

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1 2005 monitoring data.

2 CHAIR BEACH: I'm sorry, 2005. Yes,
3 exactly.

4 MR. RUTHERFORD: Yes. Well, we have
5 a lot of internal bioassay data, both for
6 plutonium and americium. We have a lot of data,
7 actually we have a considerable amount of data
8 for fission, which isn't in activation products.

9 Most of the activation products were
10 for only accelerator use. And all this data that
11 we have, you know, there's quite a bit of data
12 through that period.

13 We also, when we were in there in
14 March, we received 2015, and actually during
15 other data captures, we looked at air sampling,
16 we received air sampling data. We've looked at,
17 we got contamination survey. We looked at their
18 HP checklist. We reviewed their routine survey
19 program.

20 Their field monitoring program, you
21 know, is really quite extensive. It's, during

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1 that, today, I mean, and from what other records
2 I've seen. They have a daily, weekly, monthly,
3 annual frequency on different types of surveys.

4 They have a lot of fixed air sampling.
5 They have, you know, they do a number, you know,
6 they also do isotopic analysis on actually a
7 percentage of their air samples that come out of
8 specific areas.

9 DR. NETON: LaVon, this is Jim. We
10 also, we have a unique situation in the sense
11 that we do have some coworker models that we've
12 already developed for Los Alamos.

13 And we developed coworker models, say
14 for plutonium, through 2008. And actually, I
15 think what you would find is that the exposures
16 are less than what we're probably proposing for
17 the 100 millirem CEDE exposures, the 50th
18 percentile, at least.

19 So, in general, the exposures were
20 pretty low. I'm looking at the median excretion
21 for type S plutonium between '94 and 2008. It's

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1 .71 picocuries per day. Very low exposures.

2 CHAIR BEACH: Okay. Any other
3 questions.

4 MEMBER CLAWSON: Josie, this is Brad.
5 I just, I wanted to go back to this 51 percent
6 that you were talking about, LaVon.

7 MR. RUTHERFORD: Yes.

8 MEMBER CLAWSON: You're telling me
9 that 51 percent of the people had bioassay?

10 MR. RUTHERFORD: That's correct.

11 MEMBER CLAWSON: Okay. So 49 do not?

12 MR. RUTHERFORD: That's correct. But
13 again, remember that also includes your
14 administrative staff. And in any situation where
15 an individual was not likely to receive 100
16 millirem per year CEDE, the sites were not
17 required to monitor for them. And --

18 MEMBER CLAWSON: But --

19 MR. RUTHERFORD: Okay.

20 MEMBER CLAWSON: I understand that.
21 I've lived through that one. And I've watched it

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1 bounce around. That's why I found this
2 interesting. But, then going back to what Dr.
3 Lockey was talking about, these 91 people. Now,
4 this was an audit that they came in.

5 And they come to find out that a
6 certain percentage of the people were not on the
7 correct bioassay program, or being monitored for
8 the right isotopes. Is that correct?

9 MR. RUTHERFORD: Well, wait a minute.
10 This, the 93 that we're talking about was a
11 nonconformance that was identified by LANL itself
12 I believe. That was not identified externally.
13 This was a specific -- of the, you know, large
14 number of NTS reports that we had. So, this was
15 one example that was identified by them.

16 And it was, there were 23 individuals
17 that were not monitored at the appropriate level
18 that they should have been monitored. And they
19 took corrective actions to fix that.

20 The other reports, 484 was the one
21 that SC&A identified. And it was nonconformance

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1 compliance, the 484. That was one done
2 externally by a number of groups. And I can't
3 remember who all was involved in that.

4 And it did identify individuals that,
5 or situations with, that they felt the personnel
6 could have received more than 100 millirem CEDE.
7 And that's the one that we have asked the site
8 for additional information on.

9 It's also the one that we do have
10 information the site took corrective actions to
11 fix that situation from that point it was
12 identified. They took the corrective actions
13 and, so it wouldn't happen in the future.

14 What we looked for, what we were
15 asking for is, okay, what did you do about the
16 individuals that potentially could have been
17 exposed? Did you monitor them. What was done?
18 Those types of things. So we could ensure that
19 the proper, the appropriate monitoring had
20 occurred.

21 MEMBER CLAWSON: Okay. I, that's the

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1 part that I didn't see, that they had a corrective
2 action. I'm sorry.

3 MR. RUTHERFORD: Yes.

4 MEMBER CLAWSON: I just, because
5 usually when you have a report like that there's
6 corrective actions and what they did to be able
7 to get in there. So, okay.

8 MR. RUTHERFORD: Yes.

9 MEMBER CLAWSON: Okay. I appreciate
10 it. Thank you.

11 CHAIR BEACH: Yes. And, Brad, this is
12 Josie. I think you'll hear more about that from
13 Joe. Because he's got that in his write up as
14 well.

15 MR. RUTHERFORD: Right.

16 MEMBER CLAWSON: Okay. Yes. I was
17 just trying to get a better handle on that.
18 Because, yes, usually when they have something
19 like that there's a lot of different outcomes.
20 So, thank you.

21 CHAIR BEACH: And any other Board

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1 Members, questions? Joe --

2 MEMBER LOCKEY: LaVon --

3 CHAIR BEACH: Oh, go ahead.

4 MEMBER LOCKEY: LaVon, Jim Lockey.

5 One more question. When you did the basic
6 construction on the hypothetical person, under
7 there it sort of, it's striking to me that 100
8 millirem is a POC is 31 percent for lung cancer.
9 I mean, it might be an awfully small dose but it
10 has a high impact.

11 MR. RUTHERFORD: Right.

12 MEMBER LOCKEY: Am I reading that
13 correctly?

14 MR. RUTHERFORD: You are reading it
15 correctly. Jim, you can jump in and --

16 DR. NETON: Well, yes. This is Jim.
17 You have to remember that 100 millirem is what's
18 called a Committed Effective Dose Equivalent.
19 And so, that number represents the weighted
20 summation of the doses to all the organs, based
21 on some weighting factors.

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1 And so, the doses themselves to
2 individual organs are much higher than 100
3 millirem in many cases. For example, the
4 weighting for the lung is .12. So, it's going to
5 be ten times whatever the rem dose, you know.
6 So, it's a slightly complicated terminology.

7 But these effective doses, you know,
8 it's a 50 year committed dose from receiving 100
9 millirem in that one year. And we do that for
10 every year.

11 In the case of the example I think it
12 was a 20 year work history. In each case the
13 person received a 100 millirem CEDE for each of
14 every 20 years that they worked.

15 CHAIR BEACH: Joe, for SC&A are there
16 any questions? Do you have NIOSH's presentation,
17 before you jump into yours?

18 MR. FITZGERALD: No. I think we
19 encountered some of the same issues. And I think
20 I can raise considerations as part of that.

21 CHAIR BEACH: Okay. Is there any

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1 other questions before I turn it over to SC&A?

2 LaVon, thank you. And, Joe, you're up.

3 **SC&A Review of Addendum**

4 MR. FITZGERALD: Good morning. I'm
5 not going to repeat some of the background
6 information that LaVon presented pretty well.
7 So, in terms of the petition history and the
8 Addendum, that's all been pretty well covered.

9 I'm going to jump to, and I'm using my
10 slides. I think everybody should have a copy of
11 those. They're not very lengthy. But I think
12 they highlight the review that we did.

13 And this Addendum certainly is an
14 interesting one. It's different than a lot of
15 the more technical reviews that we've done. But
16 it does have a lot of precedent for all the sites
17 that would be covered under EEOICPA.

18 Clearly, I think as LaVon points out,
19 this presumption of compliance based on 835 would
20 apply across all of these sites that would be
21 under SEC considerations. So, certainly the

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1 precedent is set, and the implications of doing
2 so are pretty important. So, it goes well beyond
3 Los Alamos.

4 And as such, you know, I think I made
5 this point in the, in my review, that effectively
6 it's a fundamental policy question that's founded
7 on a number of considerations, some of which are
8 dosimetric.

9 But as such, we wanted to, as is
10 SC&A's role, stick to providing, you know, the
11 considerations that might be important for the
12 Work Group and the Board to weigh, in terms of
13 this discussion, because of the implications of
14 making this decision.

15 So, in terms of lines of inquiry, the
16 first thing we wanted to do is look at the
17 presumption of compliance, the question of
18 assuming the various and sundry dosimetric
19 issues.

20 The monitoring, record keeping issues
21 would be resolved by January 1st of '96, by virtue

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1 of 835 being enacted. We want to provide some
2 perspective on that as, certainly as a starting
3 point.

4 And beyond that, if one were to decide
5 that particular date, that milestone is in fact
6 the watershed that is being, certainly is being
7 discussed, then how would you actually determine
8 whether or not that was reasonably being
9 implemented or not?

10 So, those lines of inquiry, you know,
11 the basis for choosing January 1st of '96, and
12 assuming compliance resolved all these issues,
13 and then going further. And if that is the case,
14 how would you actually, what metrics would you
15 provide to make that determination?

16 And of course, NIOSH did so in terms
17 of looking at oversight findings that we just
18 discussed. And whether or not that was that
19 adequate.

20 So, based off of the first one, in
21 terms of the presumption of compliance. And, you

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1 know, and my issue, it sounds philosophical, but
2 actually it has its roots in sort of how DOE
3 enacted 835, and how these radiation protection
4 practices were in fact carried out, implemented,
5 and enforced during the '90s.

6 This is certainly, as was pointed out
7 in the ER, was a time of a lot of upgrades, a lot
8 of, you know, policy changes.

9 And certainly the question is, you
10 know, is there a point where one could in fact
11 assume or presume that, you know, your
12 fundamental monitoring and recordkeeping
13 practices were such that you could obviate the
14 need to actually evaluate some of these dose
15 reconstruction issues that we've been weighing,
16 certainly in the years prior to '95?

17 And my concern, and I think it's
18 expressed in here, is that I think program
19 compliance, which is what 835 in terms of
20 implementation starting in '96 required, and the
21 process that led to that, is not the same as

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1 actually implementing these requirements in
2 practice.

3 And that distinction, I think we went
4 through some pains to at least illuminate that a
5 little bit. Certainly, the program, the RPP,
6 Radiation Protection Program, was required to
7 have the key elements, including dosimetry,
8 internal dosimetry, external dosimetry, in place,
9 and procedures that would implement that in the
10 workplace, and what have you.

11 And that was certainly validated in
12 '95 into '96; that in fact those programs were in
13 place. But clearly you had situations where the
14 interpretation, as far as whether the procedures
15 did so, and whether or not the actual practices
16 were being implemented.

17 In other words, we talk about a
18 provision in 835 that requires that you have,
19 say, radiation work permitting systems, and
20 bioassays, adjusted bioassays, participation,
21 enrollment, all those criteria. You might in

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1 fact have procedures that called for that. But,
2 as we have outlined, at least -- we'll probably
3 get into this tomorrow with Savannah River -- but
4 the actual implementation, whether or not the
5 management and the contractor holds workers
6 accountable, whether in fact you get
7 participation, whether you in fact enroll workers
8 in these programs, and whether the monitoring
9 actually takes place, is something that is not
10 validated, essentially, on January 1st of '96.

11 You validate the program, you validate
12 the fact there's procedures. But in terms of
13 actually verifying whether or not these
14 enrollments and participations are taking place,
15 that doesn't happen necessarily.

16 The process wasn't designed to, in
17 fact, go to that level of detail in terms of
18 implementation. The contractor certainly had to
19 validate that they had come into compliance.
20 But, again, compliance is not equivalent to
21 implementation. Implementation requires the

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1 necessary sampling and verification at the ground
2 level. And there wasn't time.

3 I mean, this was something that was
4 moving pretty fast. They had to put teams
5 together, and they had to validate and meet the
6 deadline. So the level of validation we're
7 talking about did not happen, certainly,
8 necessarily, by that date.

9 So, anyway, I think our major point is
10 that a lot of the work that certainly NIOSH has
11 done, and that we have done looking at the
12 adequacy and completeness of records, of the data
13 itself, if something that doesn't necessarily
14 happen by way of this process. This is a
15 compliance and enforcement process. What we're
16 talking about is the accuracy at the ground level
17 of whether or not the participation in bioassay
18 programs, whether the completeness of the
19 recordkeeping, and whether or not the monitoring
20 had actually taken place.

21 And that's something you really don't

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1 find from a top-down level. That's something you
2 actually have to do from the bottom up.

3 And that's one, still staying on the
4 same slide, that's one shortcoming of on relying
5 on things like ORPS and oversight findings and
6 notices of violation to pick up. Because, almost
7 by definition, they're not designed to verify
8 whether or not the procedures that you have in
9 place, and whether or not the actual management
10 is supporting a particular practice.

11 That comes from, I think, the level of
12 self-assessment that is evident, frankly, in what
13 Los Alamos did in 1999, which I'll get to in a
14 minute. But that's something you really
15 essentially have to go down and actually sample
16 and survey. And that's something that a typical
17 regulatory oversight program doesn't do.

18 And I guess the other thing I would
19 cite is that, you know, certainly '96 is a
20 milestone. But so was '89, '92, I would say '98,
21 and 2002. I mean, the program at the DOE sites,

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1 in terms of radiation protection, was very much
2 a evolutionary program. It wasn't any single
3 time that these programs, in particular the
4 dosimetry programs, rose to a level, uniform
5 level of functionality. It was something that
6 took time.

7 I mean, the policies and the
8 regulations ratcheted up expectations, ratcheted
9 up accountability. But a lot of these programs
10 were very much embedded in the ways the
11 contractor practiced them. They weren't turned
12 around overnight by a piece of paper. It took a
13 great deal of time and effort, as well as the
14 different upgrades in the policy and programs, to
15 bring the departmental programs up to a level of
16 uniform implementation.

17 And as I said in the evaluation, one
18 could argue that, you know -- and different sites
19 had different levels of progress -- but in terms
20 of uniform level of performance or functionality
21 in dosimetry, that really did not happen until

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1 you coupled the dosimetry standard with the
2 DOELAP Accreditation Program and actually had
3 some very firm deadlines.

4 I know for internal dosimetry it was
5 January 1st of 2002 where the sites had to have,
6 not only on paper, a program that satisfied the
7 requirements of 835, but they had to withstand
8 the evaluation of independent outside reviewers
9 that the actual practices, the functionality of
10 the program, satisfied that internal dosimetry
11 standards.

12 So, you know, to me, when we talk
13 about a presumption of compliance, or a
14 presumption of anything, you're talking about an
15 understanding that in general your programs are
16 going to satisfy the expectations of the
17 requirements and of the programs, with rare
18 exceptions, I guess you might say.

19 And I don't think that happened on
20 January 1st of 1995. I think you are talking
21 about a progression that perhaps somewhere in the

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1 late '90s up to the accreditation milestone of
2 2002 across the DOE that you had programs that
3 certainly could be certified as being fully
4 functional against those requirements.

5 Anyway, beyond this question of
6 presumption, I just basically wanted to walk this
7 thing down. I think, again, NIOSH did a pretty
8 thorough job of walking down the implementation
9 or compliance against the various reviews that
10 you could apply against it.

11 There's nothing particularly magical.
12 I think I identified three areas of interest.
13 The first of whether or not there was a thorough
14 and valid review process. The second is whether
15 or not there was any evidence of nonconformances.
16 And the third one was basically, quite apart from
17 nonconformances, was there any clear inadequacies
18 from a technical or program standpoint that would
19 stand as exceptions to this?

20 And on the first issue, as I indicated
21 in the review -- and this goes into a lot more

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1 detail there -- the process that followed by Los
2 Alamos is very much similar to the process
3 followed by all the DOE sites. You know, they
4 had to validate by about mid-1995 to their
5 headquarters program offices and field offices
6 that the RPP, the Radiation Protection Program,
7 satisfied the basic elements of 835, and
8 withstand some validation that the procedures at
9 the ground level were likewise in conformance.

10 But I wanted to point out that it's
11 not quite the holy grail in terms of the
12 validation that we would like to think happened
13 by January 1st of '96. That really was a speeding
14 process. Certainly, the process of trying to get
15 everybody to have a RPP defined, to have that RPP
16 reviewed -- I know for Los Alamos, for example,
17 on the RPP they had to satisfy any outstanding
18 nonconformances that came out of the Rad Con
19 Manual from a few years earlier.

20 So there was a number of loose ends
21 that had to be resolved before that was done.

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1 And that process did end up being accepted. And
2 they were approved by late '95.

3 But I wanted to point out in our
4 review that there wasn't really any acceptance
5 criteria that the sites could use. I mean, there
6 was implementation guides that were under
7 development by DOE. Those weren't available in
8 time for the process to use. They came out late
9 in '95.

10 And also that, quite apart from any
11 uniform acceptance criteria, the sites were given
12 quite the latitude as to what extent that their
13 existing programs met 835. And I provided some
14 excerpts from the RCCC, the Radiological
15 Coordinating Committee, that DOE made use of.
16 This was the committee that oversaw the
17 implementation of 835 DOE-wide.

18 And I think that kind of gives one a
19 perspective of the discussions and the concerns
20 that were expressed at that very time, that, you
21 know, it was one that was driven by the sites.

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1 And to some extent there was concerns that the
2 sites had too much latitude as far as
3 interpreting how that would be applied.

4 I just throw that in because I think,
5 while there was a deliberate process in place, it
6 was one that certainly a lot of leeway was built
7 into it.

8 The second issue I want to just touch
9 on, and I think LaVon mentioned this already, is
10 that looking at the various noncompliance
11 tracking systems, ORPS, oversight reviews. I
12 mean, I looked at the Defense Board
13 recommendation, and a number of the incident
14 reports. You know, there's a lot of, lot of
15 oversight reviews. But I think the one that's
16 most telling is the one that we cited, the 484.

17 And this one I think has a lot of
18 implications. First off, it's 1999. This is
19 several years after implementation. I don't know
20 if anyone picked up on the parties that were
21 involved in the review, but I think that's

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1 likewise telling.

2 You know, Los Alamos, one of the
3 premier laboratories in the country, in terms of
4 having the need for a self-assessed internal dose
5 evaluation, reached out to MJW and Savannah River
6 to be the outside reviewers of this program.

7 That, you know, one could say it's a
8 little bit of a head scratcher, because you would
9 think a lab like Los Alamos would reach out to
10 Livermore or Sandia, or Mound -- not Mound, but
11 maybe Brookhaven, or somebody, you know. But
12 Savannah River and MJW, specifically. And,
13 again, we didn't have time to run this down to
14 ground, because of the timeframe. But it should
15 be pointed out that MJW, with its knowledge of
16 the Mound non-compliances on bioassay in 1997,
17 and Savannah River having gone through its major
18 Notice of Violation in 1998.

19 You know, again, somewhat
20 circumstantial. But nonetheless, clearly Los
21 Alamos reached to those two sites, and people

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1 that would be knowledgeable about this issues of
2 job specific bioassays at those two sites, to
3 review its own program to get ahead of the curve,
4 you know, under Price-Anderson.

5 If you suspect or know that you have
6 a fairly serious noncompliance programmatic gap,
7 something that would indicate that you are
8 falling quite short of the regulations, you're
9 obliged to do a self-assessment and self-report
10 as soon as possible. Otherwise the enforcement
11 mechanism provides for greater penalties, or
12 certainly greater consequences.

13 And this particular case, what the MJW
14 and SRS folks, as well as some of the Los Alamos
15 folks, found were issues that were very similar
16 to what were found at Savannah River as well as
17 Mound in the previous year or two.

18 And in those cases they found issues,
19 fundamental issues with, you know, lack of
20 participation in job-specific bioassay programs.
21 Now, they did a very limited sample in this case.

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1 But they found in one RWP -- and I won't use the
2 exact numbers, since they were redacted -- but,
3 you know, 40 percent, on that RWP, did not
4 participate in job-specific bioassay.

5 That's pretty close to the kind of
6 nonparticipation rates that were found in
7 samplings at the other two sites. So, certainly
8 that's an issue.

9 Certainly, the other item, you know,
10 Johnson Controls is the major site subcontractor,
11 one that would employ the CTWs at Los Alamos, was
12 enrolling all workers potentially exposed to
13 nuclides into the appropriate bioassay programs.

14 Now, in the report, or in the memo, I
15 kind of put an asterisk in all of this because
16 the findings were, again, I think very qualified.
17 They were very careful to say some workers were
18 not complying with their RWP, some workers were
19 not completing their checklists, and Johnson
20 Controls was not enrolling all workers who were
21 potentially exposed.

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1 And, you know, they almost had to do
2 that. Because, again, this had enforcement
3 implications under Price-Anderson. And one
4 cannot overstate, if you've only done a limited
5 sampling, this was a limited sampling, you can't
6 overstate the basis of your findings, because
7 they would carry the weight of regulatory
8 enforcement.

9 So, in this case, I think the team
10 spent three days looking at a limited number of
11 RWPs, and checklists, and what have you. And
12 that was the basis for these findings.

13 But I think, you know, as we're
14 looking at some considerations, we don't know the
15 scope of this. I understand that NIOSH is
16 exploring this with Los Alamos, trying to find
17 out. But we may never know the scope, in the
18 sense that the review team probably just did a
19 limited, very limited sample over the few days
20 they had.

21 But this raises some questions. And

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1 the same questions that we're raising, I think,
2 as Savannah River. If you, you know, have a
3 problem with your bioassay participation and your
4 program enrollment, it's very clear that you have
5 a question that rides on the completeness and
6 accuracy of your database.

7 And the scale and scope of that
8 incompleteness or inaccuracy is something that
9 you're not going to be able to know without doing
10 a fair amount of leg work. And this is something
11 that a presumption of compliance will not get
12 you. And that's the concern I would have.

13 And these corrective actions, I mean,
14 that were indicated, you know, and the scale --
15 and you're talking about a post-835 corrective
16 action program. It's pretty broad. I mean, it's
17 very similar to what Mound and Savannah River had
18 to go through in terms of reordering their
19 bioassay program as well.

20 Now, again, establishing a web-based
21 Dosimetry participation verification program to

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1 ensure better management of worker bioassay
2 participation, the development of LANL-wide
3 dosimetry enrollment criteria. If you don't have
4 adequate enrollment criteria, I would contend
5 that, you know, you really don't know where you
6 are in terms of the scope of the program.

7 So, certainly that raises some
8 implications as to, you know, what was the
9 existing program before that, and whether or not
10 that was adequate. And I can go -- you know,
11 it's in the report. But revising the checklist
12 procedure, the bioassay enrollment procedure, the
13 bioassay kit procedure, radiological dose
14 assessment process, the special internal
15 dosimetry and bioassay process, terminations.
16 It's essentially almost the entire program.

17 So, yes, it does raise a question. So
18 do the violations that were highlighted at the
19 other sites. So, this goes back to the question
20 of presumption, you know. The presumption
21 certainly carries weight if one can show it

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1 applies more so than not.

2 But, you know, I just would suggest
3 that just looking at the few sites that come to
4 mind, all of them have shown some pretty
5 fundamental issues on the bioassay programs, in
6 that '97 to '99 timeframe.

7 So, it's pretty clear that even though
8 835 was enacted, the actual implementation lagged
9 quite a bit behind that. And I think that's
10 something that we have to keep in mind.

11 The other issue I want to raise is
12 just, and this has, certainly has implications
13 for the Work Group. Because the Work Group has
14 a number of outstanding SEC related issues that
15 were carried over from the last SEC period.

16 And the question, I went ahead and put
17 this in my memo of last, I guess it's April or
18 May is, you know, these are questions about how
19 one monitors the mixed activation products, the
20 mixed fission products, and exotics.

21 And the question is, if in fact the

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1 monitoring information and data were inadequate
2 up through the end of '95, what has changed in
3 '96 that would ameliorate those kinds of issues?

4 And if one can't be confident that the
5 enactment of the actual regulation on January 1st
6 did that, then I think all those issues certainly
7 are standing to be resolved.

8 And I guess the only, the last thing
9 I have on my list, and, LaVon, I don't think you
10 mentioned it. We did talk about this, which was
11 on neptunium, that was certainly an issue that
12 was raised, I believe by the petitioner, and
13 addressed in the ER Addendum.

14 And as we say in the report, we don't
15 think it's a settled issue. We did take a look
16 at NIMS, the inventory system that DOE operates.
17 And we still think there's a question about other
18 source terms, and perhaps other operations that
19 need to be addressed on that.

20 Finally, this last page, just
21 considerations for the Work Group. Again, I

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1 think the good, to me this is kind of a policy
2 question, and something that the Work Group has
3 to wrestle with. But we wanted to provide some
4 considerations for your review.

5 But I think the presumption of
6 compliance represents a significant precedent.
7 And really the issue is, should presumed
8 compliance preempt a deliberative review of
9 program implementation if in fact one can point
10 to enough examples where implementation certainly
11 lagged the compliance?

12 And the significant compliances for at
13 least three sites, including Los Alamos,
14 regarding respective bioassay programs,
15 illustrate this.

16 And if one wanted to look for
17 milestones on that continuum I discussed a little
18 earlier, one could certainly look at the
19 functionality of the bioassay program that's
20 represented by the accreditation standards that
21 were put in place in '98, and then implemented by

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1 January 1st of 2002. That's probably a better
2 lower common -- lowest common denominator as far
3 as practice than something earlier.

4 And finally, as I just discussed, the
5 continuity and coherency of the technical
6 evaluation is important. I mean, we spent a lot
7 of time in the Work Group, and I think you can
8 remember this.

9 It was about three years' worth of
10 discussion on some of the established bioassay
11 deficiencies, the air monitoring gaps that were
12 apparent before '96. And, you know, what's
13 happened to those?

14 I mean, are those in fact mitigated by
15 the rule coming out? And is it different? Is
16 there a difference on the technical level?

17 That's it. I mean, I think there's a
18 more detailed discussion. You have the report.
19 But that's kind of where we're at right now.

20 CHAIR BEACH: Thank you, Joe.
21 Questions for Joe from Board Members? Anybody on

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1 mute or -- I think you've stunned everyone, Joe.

2 MEMBER CLAWSON: Josie, this is Brad,
3 I'm good.

4 CHAIR BEACH: Thanks, Brad. Jim,
5 anything for Joe?

6 MEMBER LOCKEY: Joe, Jim Lockey.

7 MR. FITZGERALD: Yes?

8 MEMBER LOCKEY: In your presentation
9 you used the term "substantive implications for
10 dose reconstruction." Can you further define
11 that use of the term for me, what do you mean by
12 that?

13 MR. FITZGERALD: Well, you know, the
14 rule covers everything from what your signage
15 should be in the workplace to, you know, what
16 your records should look like.

17 I think what I was talking about was
18 the portions of 835 most relevant to the dose
19 reconstruction that NIOSH is charged with and I
20 think NIOSH did a good job in its ER identifying
21 some of those provisions, one of which was the

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1 100 millirem a year CEDE where everybody, you
2 know, with that potential would be monitored, and
3 when I call it "substantive" I'm talking about
4 those aspects.

5 And when I talked about the non-
6 compliance 484, in particular I think we were
7 highlighting that there were a number of findings
8 that went right to that particular issue, that
9 these were substantive findings of non-
10 conformance with portions of 835 that go directly
11 to who gets monitored and the 100 millirem a year.

12 MEMBER LOCKEY: Okay. And then one
13 other question. When, was it 835, that was the
14 January 1996, correct?

15 MR. FITZGERALD: That was enacted --
16 yes, that was enacted or implemented January 1st.

17 MEMBER LOCKEY: Was there any lead-
18 up, did the DOE sites have any lead-up that that
19 was coming down the pike, this is just for my
20 edification, and preparation time, or how did
21 that come about?

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1 MR. FITZGERALD: First off, a lot of
2 the provisions, and I think even NIOSH would
3 agree, they had this in their ER, a lot of the
4 provisions were carried forward from DOE Order
5 5480.11, which was implemented in '89.

6 So we're not talking that, talking
7 about the specific technical provisions being
8 dramatically different, there were some upgrades.

9 But fundamentally it brought forward
10 a lot of the provisions that were already in place
11 in 1989, including the 100 millirem a year. Now
12 the sites were directly involved in the
13 development process of 835, there was a lot of
14 coordination going on.

15 I mentioned this RCCC, that was
16 chaired by one of the field offices, I think it
17 was Albuquerque, and all the field offices and
18 headquarters programs were a part of that. This
19 was all HPs, so every step of the way there was
20 knowledge of what 835 would have in it.

21 When the rule was approved, which was

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1 about, I think it was some time in '94, about 18
2 months ahead of the deadline, it had in it some
3 timeframe for reviewing individual programs,
4 looking for needs for exemptions, and certainly
5 marshaling a process that, you know, starting
6 with self-assessments by the contractor and then
7 followed by external review by the DOE Program
8 folks.

9 You know, that all led to this
10 deadline of having this thing become effective
11 and enforceable under Price-Anderson. That was
12 the key, became enforceable under Price-Anderson
13 on January 1st.

14 Now I might add that, you know,
15 whereas the for-profit contractors, like, you
16 know, DuPont at Savannah River, EG&G at Mound,
17 were liable for civil penalties.

18 Los Alamos was not. The non-profit
19 contractors were exempt from actual monetary
20 penalties, so they could be cited, but there
21 would be no actual monetary penalties. So --

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1 but that, again, took place on January 1st.

2 MEMBER LOCKEY: Thanks.

3 CHAIR BEACH: And, Jim -- or sorry,
4 Joe, this is Josie, is there anything moving
5 forward for the Work Group?

6 I know in your report you mentioned
7 that traditional validation and verification
8 sampling for adequacy and completeness is
9 something that we do at all sites, is that
10 something we could do in this case?

11 MR. FITZGERALD: Well, the first thing
12 I would say is that it's up to the Work Group.
13 Clearly, NIOSH is following up on that 484 Notice
14 of Violation to get more information, background
15 information on, you know, what corrective actions
16 they took and who may have been missed.

17 But we're talking about trying to do
18 a completeness survey of something 20 years ago
19 at a site and, you know, you would have to, I
20 think -- I'm speaking from firsthand knowledge
21 having just done that at Savannah River, you

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1 would have to locate the, you know, RWPs where
2 you had exposure potentials, you know, that would
3 be 100 CEDE, 100 millirem CEDE, and then you would
4 have to look at whether or not, you know, the
5 workers who were on those RWPs were in fact
6 monitored.

7 But, yes, I mean it's possible. I'm
8 just saying it certainly would not be easy at
9 all, but that would be about the only way you
10 could verify, you know, what I think the outside
11 review team could not verify given the three days
12 they had.

13 It was a 3-day review. I mean I can't
14 imagine, they probably only had an opportunity to
15 look at very few pieces of paper, checklists and
16 RWPs, in terms of those findings, but it was a
17 knowledgeable group.

18 I think it was the same group as I was
19 saying earlier that dealt with the violations at
20 Savannah River, were knowledgeable about the
21 violations at Mound, that's why I think they were

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1 handpicked by Los Alamos to come in and actually
2 scrutinize their bioassay program.

3 So it was very clearly with something
4 in mind to address an internal concern over the
5 accuracy of the job-specific bioassay program and
6 the enrollment program that Johnson Controls was
7 implementing.

8 So there were some, you know, there
9 was certainly some knowledge ahead of time, which
10 is something maybe NIOSH can also check on, which
11 is, you know, clearly there was some concern by
12 the lab over the program that led to the
13 invitation to bring in these specific outside
14 players to actually take a look and see whether
15 or not these issues existed at Los Alamos as well.

16 DR. NETON: Josie, this is Jim. I
17 think we'd like to explore this a little further
18 before the Work Group would start changing
19 direction and going down to verifying this in a
20 traditional way that we have done.

21 We are set to present this to the full

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1 Board next week and I think I'd like to have a
2 little more discussion on this that might help
3 elucidate some of the points that Joe has made,
4 or at least to mention counterpoints.

5 CHAIR BEACH: Yes. No, Jim, I agree
6 with you. I didn't want to make any assignments
7 or anything, I was just curious just for more
8 reflection on --

9 DR. NETON: Right. And if I could I
10 have a couple comments maybe on Joe's, nothing -
11 -

12 CHAIR BEACH: Yes. No, please, I was
13 going to ask you next. Go for it.

14 DR. NETON: Okay, if everyone else is
15 done on the Board asking questions. Yes, I think
16 this is -- Joe is spot on that this is a
17 precedent-setting approach that NIOSH is putting
18 forward, and we recognize that.

19 We feel a little bit different than
20 Joe, obviously, that the 835 error does represent
21 a paradigm shift in the DOE operations, and Joe

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1 just pointed out pretty well that these earlier
2 precursors, like 5480.11 and the Rad Control
3 Manual, were really contractual obligations by
4 the contractor where on January 1, 1996, it
5 became a legal requirement, it was the law, and
6 it was subject to criminal and civil penalties
7 under Price-Anderson enforcement, as Joe said.

8 And even though Los Alamos being non-
9 profit I don't think we're subject to -- he's
10 right, subject to civil penalties and certainly
11 subject to criminal penalties.

12 And if I remember correctly when I
13 worked at Argonne even though -- they couldn't
14 dock your award fee based on non-compliances.
15 They couldn't force you to pay a fine.

16 So I think there is a lot more legal
17 teeth behind this than those other, essentially
18 were guidelines and contractual obligations.

19 Secondly, I think Joe trying to tie,
20 or suggesting to tie compliance with DOELAP is
21 maybe not correct, because DOELAP was really not

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1 a dosimetry standard at all. It was a
2 measurement, performance standard tied to ANSI
3 13.30.

4 It had nothing to do with the 100
5 millirem monitoring requirement at all. It had
6 to do with how well you could measure an analyte
7 in an bioassay sample. So I don't think that
8 really is a good way to go.

9 And, third, I think -- I agree that
10 the implementation of 835 is probably -- there is
11 a lot of nuances in 835 and implementation guides
12 weren't in place, but we're not talking about
13 overall compliance with 100 percent of 10 CFR
14 835, we're really talking about is there a
15 program in place to ensure that a 100 millirem
16 CEDE monitoring requirement was in place.

17 It's a very narrow subset of 835,
18 albeit a very important subset, and we'd be happy
19 to discuss some of the bioassay deficiencies that
20 Joe has pointed out in some of these audits and
21 such, but we'd like to couch that in terms of did

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1 that really prevent, does that really mean that
2 using the -- assigning 2 percent of the
3 occupational exposure limit for workers is not
4 bounding on the category of workers who were not
5 monitored.

6 That's really what we want to get to,
7 is can we bound unmonitored workers by assigning
8 2 percent of the occupational exposure limit, and
9 I still believe that we have a pretty good case
10 to make here although I also agree that some
11 discussion needs to take place. That's all I
12 had.

13 MR. FITZGERALD: Jim, what was the
14 first point again? You were -- I was trying to
15 catch up with the --

16 DR. NETON: Well, 835 was not just a
17 contractual obligation, it became a law at that
18 point subject to civil and criminal penalties.

19 MR. FITZGERALD: Yes. I guess my only
20 comment, and I think I mentioned this in the
21 report is, and you are certainly aware of this

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1 from your experience at Fernald and other
2 locations, is that, yes, there certainly was a
3 series of policy milestones and upgrades, Tiger
4 Teams, everything.

5 The 90s was a pretty active period.
6 But the reason why it took time was you had very
7 much an embedded safety culture at the various
8 sites, some more so than others, where the
9 program, not to mention the Rad Protection
10 Program, felt strongly that they had a fully, not
11 only compliant, but a very world-class operation
12 and it didn't become apparent until you had
13 external reviews, you had the enforcement program
14 in place for a years and whatnot before even these
15 programs became cognizant that, yes, from an
16 implementation standpoint, yes, we might have a
17 very solid program with excellent procedures,
18 excellent expertise, in terms of the health
19 physicists managing those programs, but you know
20 what, it turns out that the CTWs are not
21 participating in the bioassay program.

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1 It turns out that even though the RWP
2 required the urinalyses to be left behind they
3 were not.

4 So there is issues that, you know,
5 certainly go beyond whether or not it was, quote,
6 "a legal" requirement and I think there was good
7 faith implementation and good faith compliance
8 against 835 but you had some very deep-seated
9 cultural issues as far as the programs that are
10 in place.

11 These programs are in place for 30, 40
12 years. In fact, some of these labs essentially
13 invented the health physics program as we know it
14 and some of the people that were in charge of
15 those programs were the leaders in the field.

16 So, you know, it's a tough issue and
17 I think it did take time even with the passage of
18 835 before the program came, before these
19 programs came up to a level of uniform
20 conformance with expectations.

21 And I think even with 835 I think the

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1 Department understood that it was a very
2 important means to leverage this but it wasn't
3 going to happen overnight either.

4 So the only caution I would throw out
5 on that is that when we talk about presumption of
6 compliance on January 1, 1996, I think we have to
7 qualify that by saying, yes, these programs did
8 not magically have that capability and capacity
9 to implement even the essential parts of the
10 programs.

11 We talked about the 100 millirem,
12 that's a difficult, you know, that's a difficult
13 provision of 835 to evaluate or to oversee. I
14 mean that's an expectation, you know, that these
15 programs had the capability and the knowledge and
16 the procedures to actually weigh who would get
17 bioassayed and to implement that effectively.

18 And I think some programs did, some
19 programs took time, and it took DOELAP to
20 actually force the issue in the end on some other
21 programs.

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1 So it wasn't a uniform process and
2 certainly I think one has to be cautious about
3 assuming January 1st was the -- you know,
4 everything, you know, was transformed at that
5 point in time.

6 As far as the DOELAP standard, yes,
7 you know, certainly that was something that was
8 connected to 835 with the amendment in '98, but
9 that was I think the first time that the
10 functionality of the dosimetry programs was
11 actually put in place, within the confines of 835
12 with some of the --

13 DR. NETON: But it had nothing to do
14 with dosimetry, Joe.

15 (Simultaneous speaking.)

16 MR. FITZGERALD: Yes, but I think
17 that's -- by making it attendant to 835 as opposed
18 to a separate program.

19 DR. NETON: Well, I understand. But
20 you could be 100 percent DOELAP compliant and not
21 be compliant with the 100 millirem monitoring

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1 requirement. You could be DOELAP accredited and
2 you've not brought about your ability to monitor
3 workers with 100 millirem CEDE.

4 (Simultaneous speaking.)

5 MR. FITZGERALD: -- I think it would
6 certainly make it much more likely that you
7 wouldn't have 80 percent of your job-specific
8 bioassays not being collected and how that --

9 DR. NETON: I don't agree with that,
10 Joe.

11 (Simultaneous speaking.)

12 DR. NETON: I've run two DOELAP
13 programs, Joe.

14 MR. FITZGERALD: -- review and
15 actually demonstrate that.

16 DR. NETON: No. I've run two DOELAP
17 programs and they're not connected at all.

18 MR. FITZGERALD: Well, we'll leave
19 that for further review, but I'm just saying that
20 I think that was certainly a very strong aspect
21 of the '98 amendment and certainly in the 2002

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1 enactment.

2 CHAIR BEACH: Okay, thank you. NIOSH,
3 LaVon, any other questions for Joe, and any Board
4 Members, anything else?

5 MEMBER CLAWSON: Josie, this is Brad,
6 I just want to mention something. You know, we've
7 been talking about 835 being implemented and
8 everything else like that, and there is another
9 program the Department of Energy uses, which is
10 Lessons Learned.

11 I want us to use a little bit of
12 lessons learned in almost every one of these
13 sites that we have dealt with already, and, yes,
14 it was implemented January 1, 1996, but it was
15 not put into place at many, many of these sites
16 until way, way later and we have been in a
17 continuous fight with this over the years.

18 You know, you can take examples of --
19 well, I don't want to call each one of the sites
20 out and stuff like that, but they were being fined
21 in 2003, 2004, for not abiding by this.

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1 I don't really see how we could -- we
2 can use this as a marker to be able to start
3 saying in there, but to be able to say January 1,
4 1996, everybody went, wonderful, they were still
5 trying to figure out -- each one of these sites
6 is so unique they were trying to figure out how
7 to implement it into their own programs and be
8 able to get it to work because the 835
9 implementation was to try to get everybody on the
10 same page to be able to be doing the same programs
11 the same way.

12 And I really have a hard time saying
13 that we can use that date because I haven't seen
14 it work at any of our sites yet.

15 CHAIR BEACH: Yes. Yes, I agree with
16 that, too, Brad. So that's -- we've got our work
17 cut out for us determining exactly what that date
18 may be. So --

19 MEMBER LOCKEY: Josie?

20 CHAIR BEACH: Yes?

21 MEMBER LOCKEY: This is Jim Lockey. I

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1 want to follow-up with what Brad just said. What
2 I still don't -- what's not quite clear to me
3 about 835 is, were the civil and criminal
4 penalties in place as of January 1, 1996? If that
5 is indeed the case it seems to me that there had
6 to be a lead time for these various facilities to
7 make changes and implement the program before
8 that date.

9 I mean it's just hard for me to
10 believe that there would be a rule issued that as
11 of this date there are civil and criminal
12 penalties without a one or two or three year lead
13 time for facilities to reach that.

14 MR. RUTHERFORD: Jim, this is LaVon.
15 I want to point out that there was a lead time.
16 The sites were to be in compliance by January 1,
17 1996. At Fernald we were working on that
18 compliance two years ahead of that time.

19 We also were implementing, you know,
20 5480.11, a DOE Rad Con Manual, all of those things
21 in sequence up to that point. We knew 10 CFR 835

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1 was coming.

2 So I can at least speak from a Fernald
3 perspective, there was definitely an
4 implementation that occurred two years prior to
5 the actual finalization of the rule on January 1,
6 1996.

7 MR. FITZGERALD: Yes, I would add to
8 that, and I think I said it earlier, Jim, that,
9 you know, it was understood from the enforcement
10 program policy that, you know, they would
11 mitigate the penalty and the level of violation
12 for sites if they, in fact, self-identified any
13 non-conformance that came up and self-corrected
14 them in a timely manner.

15 I mean there was a heavy qualifying
16 factor on that that, you know, you find it before
17 we find it and it will be less consequential to
18 you, and I think these sites understood that and
19 that's one reason that you see I think a lot of
20 these self-assessments in the several years after
21 enactment that led to some identifications.

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1 Now there was Notices of Violations
2 written anyway because some of these were so
3 significant that it was hard not to be some
4 penalization under Price-Anderson, but I think
5 there was that period of time where self-
6 identification and corrective action was being
7 looked for.

8 CHAIR BEACH: Yes, I know --

9 MEMBER LOCKEY: That's really helpful.
10 Those comments are helpful.

11 CHAIR BEACH: Yes, and I know NIOSH
12 has more work on the 484 and that was issued in
13 1999, so I know there is more work to be done
14 here and we'll look forward to seeing that.

15 Any other comments, questions,
16 clarifications before I move to the petitioners'
17 comments?

18 (No response.)

19 CHAIR BEACH: Okay. If the petitioner
20 on the line, Andrew, and I don't know if, Terrie,
21 you have any comments, but, Andrew, if you have

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1 any comments you are welcome to make them at this
2 time.

3 MR. EVASKOVICH: Yes, I am here. This
4 is Andrew Evaskovich. Basically I just have some
5 questions. I am inferring that they are relying
6 on TA-55 data for the exotic radionuclides and
7 there are other areas.

8 Back in November at the meeting I
9 raised the issue of spallation product from the
10 accelerator. I haven't really seen anything, you
11 know, replying to that, and I believe I
12 submitted, you know, other documentation before
13 that about the spallation product.

14 Also, I have a question about
15 neptunium, was it only at TA-55 or were there
16 other areas and the weight amount, you know, is
17 100 grams the maximum or were there higher
18 amounts?

19 I have heard that more work needs to
20 be done so I am hoping that the Work Group
21 recommends to the Board that the evaluations

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1 continue until all the issues are settled.

2 Another issue I think that is still up
3 in the air, I think Joe has it in his response,
4 was the catalog for the in vivo measurements,
5 they're very limited or non-existent so they
6 didn't have the ability to determine if somebody
7 was exposed to an exotic as opposed to, you know,
8 a common.

9 And there is more work that I need to
10 do as far as presenting so I am going to try to
11 prepare a paper in the next week for the meeting
12 and also provide additional comments during the
13 meeting, but I am just asking that the Work Group
14 recommend that work proceed on this, to recommend
15 to the Board that work proceed on this because
16 it's not settled.

17 And that's pretty much what I have to
18 say today.

19 CHAIR BEACH: Okay, thank you, Andrew.

20 DR. NETON: Josie, this is Jim. I'd
21 like to comment maybe on that in vivo question

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1 that Andrew raised.

2 CHAIR BEACH: Yes, please.

3 DR. NETON: Yes, I am surprised, in
4 SC&A's report that they suggested or stated I
5 think that they used Phoswich detectors only to
6 measure fission activation products and that
7 certainly doesn't seem to be true based on my
8 review of the SRDB, Site Research Database.

9 There was a 1983 report put out, SRDB
10 133601, that is a very detailed technical
11 discussion of their in vivo measurement
12 arrangements in that era, and, yes, they did use
13 Phoswich detectors but they also had a lithium-
14 drifted germanium detector underneath the body on
15 a stretcher to measure whole body fission
16 activation products, as well as a germanium
17 detector positioned over the liver, and that
18 seemed to have been in place for quite some time.

19 We went back and looked at the in vivo
20 monitoring data from 1978 to '95 and there was at
21 least 3,600 reported measurements of fission

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1 activation products and the geometry line is
2 "GeLi detector, whole body."

3 So I am not sure where Joe got his
4 information on Phoswich detectors being used for
5 fission products, but I don't think it's true.

6 MR. FITZGERALD: Well, these were
7 quotes from staff interviews from a 2010 report
8 that has already been issued and it's in the
9 references to this report.

10 DR. NETON: Well, I can tell you
11 [identifying information redacted] put out a 1983
12 report with a very technical discussion of what
13 they did and it certainly, and, again, the
14 results that we had in the database indicated it
15 was a germanium detector measurement, so --

16 MR. FITZGERALD: Okay. Well, again,
17 we haven't had this discussion because, and I
18 don't think the Work Group has met, but the 2010
19 report that was issued by SC&A, that these are
20 basically the dosimetry staff interviews that
21 were done with the Los Alamos staff, so, you know,

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1 that's something we can certainly have further
2 discussions on.

3 DR. NETON: Sure.

4 MR. EVASKOVICH: I seem to recall that
5 there was a Tiger Team finding about the Phoswich
6 detectors as opposed to the germanium detectors,
7 also. I'll have to find that information.

8 MR. FITZGERALD: Yes, this is going
9 back, well, 2010, it's going back seven years, so
10 it's a little fuzzy at the moment, but I -- and
11 this is just one illustration.

12 There is a number of I think these
13 monitoring and record keeping issues that -- and
14 there are monitoring issues that the Work Group
15 highlighted certainly in the last SEC period of
16 review and these are still outstanding, you know,
17 in some regards for post-'95.

18 So, you know, that was just an
19 example, but there is a number of issues, and
20 these are highlighted in the Site Profile memo
21 that was sent a few months ago that as far as

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1 loose ends from previous Work Group discussions
2 these were certainly issues that were to be
3 addressed in the post-'95 era.

4 Now they've been preempted, because,
5 again, I think the policy of a presumption of
6 compliance would certainly negate, presumably
7 negate all of these issues, but, you know, these
8 are certainly issues that were outstanding
9 before.

10 CHAIR BEACH: Okay, thanks.

11 MR. FITZGERALD: And the other thing
12 I was going to mention, on neptunium we did have
13 a conclusion for that particular issue that other
14 sources, other operations that might involve
15 neptunium as one of the exotics needed to be more
16 fully addressed and the inventory used as a basis
17 for looking at that, so I think that remains an
18 outstanding issue.

19 CHAIR BEACH: Okay, I agree. So any
20 other comments, petitioner comments?

21 **Petitioner Comments**

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1 MR. EVASKOVICH: No, not at this time.

2 Thank you.

3 **Action Items**

4 CHAIR BEACH: Okay. And so action
5 items moving forward, what I see is I know SC&A's
6 memorandum came out in July, typically NIOSH will
7 give us a White Paper answering or questioning
8 SC&A's paper.

9 So, NIOSH, are you planning to do a
10 paper for that?

11 MR. RUTHERFORD: Yes. Josie, this is
12 LaVon Rutherford. We'll do that.

13 CHAIR BEACH: Okay. So that's one
14 action forward. And I know, LaVon, you talked
15 about in your site presentation some of the
16 petitioner concerns that you addressed, can we
17 look through, I know we haven't had a meeting
18 since 2012, but I don't know if NIOSH can do it
19 or SC&A, go through petitioner questions and just
20 make sure we haven't missed anything for a
21 following Work Group meeting, is that something

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1 that someone can tackle?

2 MR. RUTHERFORD: I don't mind doing
3 that. I mean I think it's part of our
4 responsibility anyway, so I don't mind taking
5 care of that. This is LaVon Rutherford.

6 CHAIR BEACH: Okay. And, LaVon, I
7 know I looked through some of Andrew's reports
8 from the past, so I guess just -- there are
9 several out there, just make sure we haven't
10 missed anything that needs to be addressed.

11 MR. RUTHERFORD: Okay.

12 CHAIR BEACH: And then moving forward,
13 is there anything else? I know we do have the
14 Site Profile report from SC&A. I don't think we
15 are ready to tackle that yet, is that correct?

16 MR. FITZGERALD: Well, like I said
17 earlier, it's moot until one --

18 (Simultaneous speaking.)

19 CHAIR BEACH: Right, right.

20 MR. FITZGERALD: -- references this
21 presumption of compliance question.

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1 CHAIR BEACH: Okay. So that paper
2 we'll just keep on hold until we are finished
3 with the SEC question. Anything else I am
4 missing, actions items that we need to address
5 moving forward?

6 (No response.)

7 CHAIR BEACH: I know you're going to
8 report out both SC&A and NIOSH at the Board
9 meeting. Unless we are overruled I suspect the
10 Work Group will have more Work Group meetings
11 after the Board meeting to work out some of these
12 issues. Anything else?

13 MR. KATZ: Josie, this is Ted. Yes,
14 just a question really. One of the reasons we
15 are having this meeting in Los Alamos is because
16 you wanted the opportunity to solicit input from
17 the public that might be germane to following up
18 on these matters that we are tackling right now.

19 CHAIR BEACH: Right.

20 MR. KATZ: So I guess my question is
21 just whether Joe, anyone, could display as part

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1 of his presentation any questions that might be
2 germane as to, for example if you are looking for
3 certain kinds of expertise from the public that
4 would be helpful for the path forward or what
5 have you, but anyway it's an opportunity, that's
6 why we're holding this meeting in Los Alamos.

7 So I would just hate to lose the
8 opportunity just because we didn't give it full
9 consideration -- so I don't know whether Joe or
10 anyone had thoughts immediately, but anyway this
11 is an opportunity, you have the public, they're
12 going to be listening attentively to this session
13 and if you're looking for certain people or what
14 have you for that kind of expertise for some of
15 the questions that are on the table this is a
16 good -- this is why we're going there, so. That's
17 it.

18 CHAIR BEACH: Right.

19 MR. KATZ: Yes.

20 CHAIR BEACH: I guess I don't know how
21 to move forward with that to get the right people

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1 in attendance to get some questions answered, so

2 --

3 MR. KATZ: Right. Well, you never
4 know who's in attendance, it's just a matter,
5 again, of whether --

6 CHAIR BEACH: Right.

7 MEMBER WALDEN: We've done this at
8 other places where we have actually put things on
9 the table as, well, these are some of the
10 questions that are facing us and that leads
11 people to either come or read the transcripts or
12 what have you. You might find somebody that
13 actually knows something about what you want to
14 know.

15 But, again, I don't really expect
16 anyone necessarily to be able to answer this
17 question now, but you might want to think about
18 that since, that's the point.

19 CHAIR BEACH: Okay. Right, that makes
20 perfect sense. Thank you. Okay, so any other
21 comments, any other sort of path forward,

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1 anything I might have overlooked that needs to be
2 done? Anything the Board Members on the phone
3 call today need from either NIOSH or SC&A to help
4 you with your thought process on this?

5 MEMBER CLAWSON: This is Brad. Not at
6 this time, Josie.

7 CHAIR BEACH: And, Jim?

8 DR. NETON: Same for me. Same for me,
9 Josie.

10 CHAIR BEACH: Ted, I am going to turn
11 it back over to you. I think we are done for
12 today unless --

13 MR. KATZ: Yes, I think we can adjourn
14 and after the discussion at the Board meeting we
15 can figure out what is a -- and I think the DCAS
16 folks will have to look into what kind of
17 timeframe they are working on and then you can
18 look into scheduling Work Group meetings as may
19 be needed.

20 CHAIR BEACH: Okay. And can we get
21 the transcript for this as soon as it's

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1 available, also, or --

2 MR. KATZ: Yes. There is no way that's
3 going to happen before the Board meeting, for
4 example, or what have you.

5 CHAIR BEACH: No. Yes, I know.

6 MR. KATZ: But, yes, it should be
7 ready in a reasonable time. This wasn't a very
8 long meeting, so it shouldn't take that long.

9 **Adjourn**

10 CHAIR BEACH: Okay. Everyone, thank
11 you for your attendance and your work. We'll see
12 you next week.

13 (Whereupon, the above-entitled matter went off the
14 record at 12:43 p.m.)

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This transcript of the Advisory Board on Radiation and Worker Health, Los Alamos National Laboratory (LANL) Work Group, has been reviewed for concerns under the Privacy Act (5 U.S.C. § 552a) and personally identifiable information has been redacted as necessary. The transcript, however, has not been reviewed and certified by the Chair of the LANL Work Group for accuracy at this time. The reader should be cautioned that this transcript is for information only and is subject to change.

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