

Excerpt from the 46th ABRWH meeting, Denver, CO, May 2-4, 2007.
The transcript pages 11 through 124 are devoted to the "DOW SEC
PETITION" discussion:

STUART HINNEFELD (NIOSH) PAGES 11 THROUGH 29

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1 or in fact, those at the table -- so let me
2 know. Thank you.

3 **DR. ZIEMER:** Thank you. Question --

4 **DR. WADE:** He's going to tell us.

=====

DOW SEC PETITION

**MR. STU HINNEFELD, NIOSH, OCAS
PETITIONER**

5 **DR. ZIEMER:** Okay, we'll do that off-line.

6 Okay, let's begin then with the Dow SEC
7 petition. We'll begin with the NIOSH petition
8 evaluation, and Stu Hinnefeld at NIOSH is going
9 to make that presentation.

10 **MR. HINNEFELD:** Thank you, Dr. Ziemer. My
11 name's Stu Hinnefeld. I'm the technical
12 program manager for OCAS in the program. I'm
13 presenting the petition evaluation report and
14 some updated information, since the petition
15 evaluation report was prepared, today -- I
16 think probably because I let LaVon Rutherford
17 go on vacation right before this was due, so I
18 think that's why I'm up here.
19 This is a -- an 83.14 petition. This is a site
20 where we determined there was some aspect of
21 the radiation dose that we did not have
22 sufficient information to reconstruct and so we
23 proceeded along the pathway of 83.14 SEC
24 evaluation.

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1 So some of the slides your normally see, like
2 the two-pronged test, I've taken out of this
3 for brevity because there's some addi-- because
4 of the update information I put in here. Well,
5 I'm sorry, there is the two-pronged test that
6 you've all seen before: Is it feasible to
7 estimate radiation doses of individual members
8 of the class. And if that is -- the answer to
9 that is no, is there a reasonable likelihood
10 that such radiation dose may have endangered

11 the health of members of the class. So those
12 are the -- that's the test we evaluate when we
13 do one of these 83.14 petitions.

14 This is about the Dow Chemic-- a site that was
15 operated by Dow Chemical Company in Madison,
16 Illinois. That's the site we're talking about
17 now. This site is in Madison, Illinois. This
18 site extruded uranium metal on a handful of
19 occasions for the Atomic Energy Commission
20 under a subcontract from Mallinckrodt Chemical
21 Works, which was the operator of the
22 Mallinckrodt St. Louis site and the Weldon
23 Spring site, and they also straightened uranium
24 metal rods under a -- this was under a purchase
25 order agreement to Mallinckrodt for a couple of

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1 -- a couple of -- on a couple of different
2 occasions.
3 Now they also routinely handled thorium at this
4 -- at this plant, and routinely incorporated it
5 into their commercial metal al-- metal alloys
6 plant. This was a -- a metal production plant,
7 made magnesium and I believe some aluminum
8 alloys, and -- and that was their main line of
9 business. The -- the uranium work was just
10 kind of something that they did -- they had a
11 big extrusion press and the AEC was trying to -
12 - they were studying the characteristics of
13 what -- what works best when you're extruding
14 uranium.

15 I -- I -- now to get into this a little bit, I
16 need to talk a little bit about dose that is
17 included under EEOICPA for AWE facilities. And
18 the original EEOICPA legislation was amended by
19 the 2005 Defense Authorization Act in two ways
20 that affect this question, you know, what dose
21 is included. The -- the first aspect amendment
22 or first amendment that affects this is that it
23 added a second category to the definition of an
24 AWE employee. Up until this amendment, only
25 employees who worked during the contract period

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1 at an AWE were considered AWE employees and
2 therefore could submit a claim under the law.
3 This amendment amended that language and added
4 -- by adding a second category of employee and

5 saying that the second category of employee is
6 a cate-- is a person who worked at an AWE site
7 after the contract period but during a time
8 when there was residual contamination from the
9 contract period present during that time. So
10 that's a second category and they're identified
11 in the statute as subparagraph (a) and
12 subparagraph (b) under one of the paragraphs.
13 And the second amendment that occurred to
14 EEOICPA by this Defense Authorization Act was
15 that they provided a definition of radiation
16 dose for the added category, interestingly
17 enough. The definition of radiation dose --
18 this is for the purposes of such-and-such
19 paragraph part (b), not such-and-such
20 paragraph. Such-and-such paragraph part (b)
21 radiation dose was defined, and this was the
22 definition. I don't think I'll read it word
23 for-word, it's on the slides and the handouts
24 to the slides, but it's essentially dose
25 received from work done by -- for AEC to

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1. produce, process, store, remediate or dispose
2 of radioactive waste that was, you know, and
3 for -- for the transportation and testing of
4 nuclear weapons. So that was the work that --
5 this was part of the radiation dose.
6 And then the second part of the radiation dose
7 definition is if there's dose that's not
8 distinguishable through reliable documentation
9 from the doses noted above. So in other words,
10 if there -- if the pers-- if an employee at a
11 site fo-- in the residual period, remember
12 that's the category of employee we're talking
13 about, is -- if the residual radiation at that
14 site can be distinguished from contamination
15 that would have occurred from the AEC work,
16 then that residual dose is not part of the
17 radiation dose assigned to these workers. So
18 what the -- the outcome of this -- and there is
19 -- oh, by -- and that's the final point of
20 this. There is no similar limitation or
21 definition of radiation dose on the original
22 category of AWE employee, so -- so you don't
23 have that limitation, that definition, and the
24 -- and the statute I think at some point
25 originally said reconstruct all doses at the

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1. site.

2 So during the covered period, the contract
3 period, all doses have to be reconstructed for
4 an AWE employee. After the contract period, if
5 there's a residual contamination period, the
6 dose that's included under EEOICPA is dose from
7 residual contamination from the AEC work --
8 okay -- not from the commercial work.
9 Now, summary of the information available for
10 dose reconstruction -- and one other thing to
11 remember on this, the thorium was used in the
12 commercial operations at -- at Madison, and the
13 uranium apparently was the AEC work. We know
14 that they did uranium work for the AEC. We
15 didn't have any individual monitoring, external
16 monitoring results. We don't have any bioassay
17 results, either in vitro or in vivo, for any of
18 the employees at that -- you know, actually at
19 this point for any employees at any time.
20 In 1957 we have the copy of the contract that
21 calls for 12 extrusion cycles, each one
22 estimates there's going to be like essentially
23 28 hours of work with an extrusion cycle. They
24 were going to set up for six hours; run what
25 they called testing, which was the extrusion,

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1 for 16 hours; and then clean up for six hours.
2 So that was the estimate of how much time was
3 going to be spent on each cycle, and the
4 contract called for 12 cycles.
5 We have documents from FUSRAP that describe two
6 rod-straightening campaigns. We've also
7 recently -- or at least we -- we know we now
8 have the purchase orders from Mallinckrodt for
9 the two uranium-straightening cam-- campaigns.
10 And we had a 1957 paper by the Dow radiation
11 safety officer who worked from Dow headquarters
12 -- he didn't work at the Madison site, he
13 worked from Dow headquarters -- that describe
14 the use of thorium, and it contains about 20
15 air sample results -- at the time we thought
16 from a single sampling (sic) campaign -- and a
17 handful of radiation surveys.
18 We also had a 1960 AEC inspection report that
19 refers to the 1957 air monitoring results. In

20 other words, it -- it kind of presented this --
21 the air -- you know, the air quality is okay
22 because we have these 1957 results. Even
23 though it referred to them as recent air
24 sampling results, it actually -- the collection
25 had been '57 and even '56 when those were

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1 collected. And they had a handful more direct
2 radiation measurements and it had the amount of
3 thorium used up to that time.
4 And we have the FUSRAP survey summary report
5 that was -- this -- the survey was done in
6 1989. I think the report was actually
7 published in 1990, and that's -- that FUSRAP
8 survey was done of only a limited portion of
9 the facility, the portion of the facility where
10 the uranium work had been done. So they didn't
11 survey the entire Madison facility, they only
12 surveyed that. They found really very little
13 in terms of contamination or elevated dose
14 rate, and they did -- but they did collect some
15 dust samples that they analyzed for --
16 isotopically, and they found some uranium and
17 thorium in those.
18 Now our data capture attempts -- recognizing
19 that, you know, at the start of, you know, this
20 effort we hadn't necessarily completed all this
21 regu-- all this data capture, we proceeded and
22 -- and made these attempts at data capture.
23 The NRC, of course DOE Germantown had provided
24 us what they had. We have searched federal
25 records repositories as part of our rou-- our

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1 part. We've had worker outreach -- we had a
2 worker outreach meeting in Collinsville,
3 Illinois and we received quite a lot of worker
4 affidavits that also described how the work at
5 the site -- described pretty harsh working
6 conditions.
7 We made a request to Dow Chemical and -- about
8 do you have any records from the site; even
9 though you haven't owned it for 35 years,
10 roughly, do you have any records from the site.
11 And we had a discussion with the state of
12 Illinois about regulatory records they might
13 have for this covered period, but Illinois was

14 not yet an agreement state in 1960 and so they
15 didn't really have anything for the period we
16 were researching.
17 So we determined that we had -- you know, this
18 is late last year, we determined we didn't have
19 sufficient information to complete dose
20 reconstruction at the time. We notified the --
21 the -- a litmus tas-- litmus case claimant that
22 his dose reconstruction could not be completed
23 and we gave him a Form A SEC petition. He
24 returned it on November 28th.
25 This was about the time -- I think it was based

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1 on discussions at a Board meeting that we said,
2 you know, we really need to make sure we've
3 done, you know, the due diligence on data
4 capture and see if we've really found
5 everything we can, so we went down those aven--
6 those avenues. We wrote to Dow asking -- hang
7 on a second.

8 (Pause)

9 I apologize, I'm out of sequence here. I don't
10 think I have all my slides up here, but...
11 yeah.

12 There's a sequence of events and sequence of
13 slides that are not on the screen. I think
14 they're in the handout --

15 **DR. ZIEMER:** They are.

16 **MR. HINNEFELD:** I've got my handout here.

17 Okay, we requested -- we wrote to Dow asking do
18 you have any records about this. We didn't
19 hear anything for about two weeks after we
20 wrote to them, we -- so we called them and
21 engaged them in a telephone call. It's the
22 kind -- you know, a few people on our side and
23 a couple of people on their side, and they said
24 well, we actually have just -- responding --
25 we've just signed the letter responding to your

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1 request and we are going to go search for
2 records. And they warned us that, look, we
3 haven't owned this site for a long time. We
4 don't know we're able -- we'll find anything,
5 but we'll go look, and they asked for a little
6 mo-- from some more specificity about what it
7 was we were asking for. So we provided more

8 specificity.

9 We sent an e-mail, trying to be more specific
10 than we were in the letter request, about kinds
11 of information we were asking for and what we
12 were looking for. And we were looking for
13 information related to thorium work from 1957
14 to 1960, and any information about maybe
15 uranium -- the uranium work or uranium
16 contamination or the uranium -- the contracts,
17 et cetera, with AEC about that.
18 On Mar-- in March 13th, after Dow had been
19 looking for maybe three weeks, we called them
20 to find out the status. They indicated that
21 they had compiled possibly responsive documents
22 -- you know, essentially collected boxes from
23 various records storage areas that they had,
24 based on database searches and keyword
25 searches. In other words, that's how they

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1 looked in the first place, and they retrieved a
2 bunch of documents and they indicated that they
3 would have to inspect those documents in order
4 to tell for sure if there were things in there
5 that were responsive to our request. So they
6 brought back pretty much anything that would
7 hit, based on their keyword searches that they
8 made, any of those hits, and looked at those.
9 But they did tell us at that time that they had
10 no indication that they had any personal
11 monitoring data. But they said that they would
12 take some time to inspect those to tell them if
13 they were -- and on -- based on that phone
14 call, all of the OCAS participants on the phone
15 call were under the understanding it would take
16 about ten days to do this visual inspection of
17 the records that they had collected.
18 So we called them a little later, expecting
19 them to be done, and they indicated at that
20 time that the inspection hadn't started as
21 intended because of weather issues and the
22 person was going from Chicago to Midland to
23 actually visually inspect these records hadn't
24 been able to get out of Chicago because of
25 weather, so it had only -- so the inspection

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1 was just starting on February -- on March 26th,

2 whereas we thought it would be done. We --
3 still, we felt like another ten days and it'll
4 be done. We were still under the impression it
5 was going to be about a ten-day effort.
6 So we called them about ten days later, and at
7 that point we found out they were about 25
8 percent done and it would take till the end of
9 April to -- before they had completed their
10 visual inspection and could tell us if they had
11 responsive documents or not.
12 So of course the end of April has just
13 happened, and we didn't want to delay our
14 presentation any more, and so we felt confident
15 proceeding with the petition evaluation report
16 with the information we had. And the reasons
17 for that were that they had indicated that they
18 had no indication of personal monitoring data,
19 and we had -- at the time we had recei-- we had
20 two documents that we had received from our
21 search of NRC records, that '57 report from the
22 radiation safety officer and the 1960 AEC
23 inspection report. The AEC report in 1960
24 referred to 1957 data for air sampling data, so
25 we said it doesn't seem like they're going to

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1 provide us any more air sampling data during
2 this covered period. So we decided we would go
3 ahead and so it was placed on the agenda for
4 today's meeting.
5 And then on Saturday they responded and sent us
6 seven -- about 700 pages of documents that were
7 responsive in some nature to -- to what we'd
8 asked for. And so since Saturday we've --
9 we've read those documents. We've reviewed
10 them in light of what we've -- what we had at
11 ti-- what we had already, and there is -- so
12 the information we received will cause us to
13 change some of the details in our SEC
14 evaluation report, like number of samples. We
15 found maybe -- maybe there's another maybe
16 dozen to 15 air samples that were collected.
17 But those were also collected in the 1956 time
18 frame.
19 We found -- you know, we got many
20 manifestations of the same data over and over,
21 and we found very few samples actually were
22 taken after the 1956 data that was cited in the

23 1957 report by the RSO. The samples that were
24 taken later generally were on a specifically
25 limited activity, like they took some samples

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1 on sanding of an alloy, you know, and -- and
2 some air samples that resulted from that. So
3 there was actually very little additional data
4 that we received that related to internal
5 exposures to thorium over the weekend.
6 We recognize that the ownership -- the data
7 ownership change might be -- has to be revised.
8 The evaluation report says that Dow sold the
9 site to Consolidated Aluminum in 1969, but in
10 fact that sale occurred in 1973. Dow
11 discontinued its operation in 1969 and leased
12 the -- leased the site to Phelps-Dodge, but the
13 sale didn't occur until later.
14 So the additional information received over the
15 weekend hasn't changed our -- our original
16 recommendation that we don't have sufficient
17 information to reconstruct the thorium dose
18 from the 1957 to 1960 period. Because of the
19 complexity of the process, the short duration
20 of the samples -- I think probably the majority
21 of these samples were of the duration of maybe
22 five to 20 minutes -- we don't have repetitive
23 samples over time of an operation to kind of
24 figure out how the -- the operation changed
25 over time, there are comments in -- during some

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1 of the collections about the normal ventilation
2 was enhanced by opening the windows and turning
3 on these fans. And so, you know, we don't feel
4 like we can say with confidence that the
5 limited sampling that we have from early on
6 provides us sufficient information to really
7 decide, you know, and bound what -- how
8 conditions may have been during four years of
9 operation with this material.
10 We did get in -- over the weekend we did get
11 some additional external radiation measurements
12 that may in fact allow us to reconstruct an
13 external component of the -- of the thorium
14 dose, whereas before we didn't think we had
15 enough data to do that, either, but we may be
16 able to do that with the additional data.

17 Now for the uranium work, the covered work, we
18 have prepared sample dose reconstructions --
19 they've been on the O drive for a while -- that
20 describes essentially an OTIB-4-like method.
21 That is, the method we use for com-- you know,
22 it's AWE-wide method for the -- describes
23 airborne data that was encountered during the
24 early AWE operations as -- and it's used as
25 sort of a bounding -- this is a bounding

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1 estimate and it's used in many applications,
2 and we've used that in many applications.
3 It's likely that we can do a -- a more refined
4 estimate (unintelligible) than that because now
5 we have available to us a -- again, a multi-
6 site site profile that was prepared by Battelle
7 that has operation-specific air monitoring
8 data. For instance, it has a collection of air
9 monitoring data that was taken during extrusion
10 runs over time, for instance, at various sites.
11 And it has data collected for straightening
12 uranium at various times. And these -- since
13 this is essentially a metal-forming operation -
14 - I mean you know what they did. They took
15 metal and they shaped it, either extruded it or
16 -- or straightened it. That's a pretty, you
17 know, well-understood -- you know, kind of a
18 small variation in -- in the work that's done.
19 Whereas the thorium worked seemed to be quite
20 variable in terms of the kinds of things that
21 were done and the extent of the -- of the work,
22 and it just seemed to be a -- quite a -- a
23 diverse set of activities that would not -- you
24 know, you couldn't really confine to
25 essentially a constant set of conditions.

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1 Okay, so I think I am now back to the point
2 where the slides are on the screen.
3 So our conclusion is that we lack sufficient
4 information to estimate the internal doses
5 resulting from exposure to thorium. At the
6 time it was unlikely we had sufficient
7 information to estimate the contribution from
8 thorium; we may in fact have sufficient
9 information to estimate the thorium dose. This
10 would be applied during the covered period.

11 We believe we have access to sufficient
12 information to estimate the maximum dose that
13 could have been incurred from the exposure to
14 the uranium during the contract period and
15 during residual contamination period using
16 methods similar to OTIB-4. Like I said, OTIB-
17 4, we believe we can bound the dose with an
18 OTIB-4-type approach, or we may be able to
19 (unintelligible) a more refined estimate based
20 on the operation-specific data that we have in
21 the Battelle document. There is the more
22 precise...
23 And we believe we can estimate occupational
24 medical dose using complex-wide approaches
25 again.

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1 We've determined that the members of the class
2 were not exposed to extremely high radiation
3 dose during discrete incidents like a
4 criticality accident, but we believe there is
5 evidence that workers suffered a cumu-- or
6 accumulated chronic exposures that could in
7 fact endanger their health.
8 So the proposed class definition is here. It's
9 all AWE employees who were monitored, or should
10 have been monitored, for exposure to thorium
11 radionuclides while working at the Dow Chemical
12 Company site in Madison, Illinois for up to 250
13 -- or for a number of days aggregating 250
14 between January 1st, 1957 to December 31st,
15 1960, or in combination with -- in aggregate
16 with other sites -- other classes. And our
17 recommendation is to add that class definition
18 because we feel like that we don't have enough
19 information, it's not feasible to do accurate
20 dose reconstructions from the thorium --
21 internal thorium dose during that covered
22 period, and we feel like there was sufficient
23 dose that it could have very well endangered
24 their health.
25 **DR. ZIEMER:** Okay, thank you, Stu. Next we'll

DANIEL W. MCKEEL, JR, MD DOW SEC-00079 CO-PETITIONER
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(footnote: SINEW is misspelled SINuW throughout)

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1 -- we'll hear from Dr. Dan McKeel who's

2 speaking on behalf -- or is one of the
3 petitioners. And Dan, we'll be pleased to hear
4 from you at this time.

5 **DR. MCKEEL:** Let's see, can I get some help
6 from somebody? I do have a Powerpoint to get
7 started. Can you help me on...

8 (Pause)

9 Good morning to the Board and -- and I thank
10 you for letting me make this presentation. I'm
11 very happy to be here today.

12 I am Dan McKeel. I'm a Missouri physician and
13 a pathologist, and a former faculty member for
14 31 years at Washington University School of
15 Medicine in St. Louis.

16 While there I published almost 200 scientific
17 articles and abstracts and held 36 NIH federal
18 grants. This year I published a textbook on
19 dementia management and diagnosis.

20 I have worked actively since 2000 on nuclear
21 industry issues that affect human health. My
22 remarks today are solely focused on Dow SEC
23 petition 79. Arthur Wieder, is the NIOSH
24 identified petitioner, and I am his designated
25 SEC petitioner. This report is entirely my

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own. No one else has seen it or edited it.

2 I represent members of the Southern Illinois
3 Nuclear Workers, our acronym is SINuW. I have
4 worked with the former Dow workers and ConAlCo
5 workers and present-day Spectrulite workers for
6 almost two years. I feel I know them and the
7 Dow Madison site operations very well.

8 An overriding consideration here is we were
9 very hampered by lack of access to primary site
10 records. Two members of our SINuW SEC team,
11 Robert Stephan from Illinois Senator Obama's
12 office and Debra Detmers from Illinois
13 Congressman John Shimkus's office, will make
14 remarks that amplify mine. Congressman Shimkus
15 and Senator Obama called to address the Board
16 about this SEC previously. And they and
17 Senator Durbin and Congressmen Jerry Costello
18 of Illinois have also written letters in our
19 behalf.

20 As have other SEC petitioners, I want to
21 express my appreciation to the Board, to SC&A
22 and to NIOSH for their help in this complex SEC

23 process. Laurie Breyer and Larry Elliott at
24 NIOSH, and many others at OCAS, have provided
25 assistance that I and SINuW deeply appreciate.

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1 There are five overarching issues that I will
2 address in turn about the Dow SEC. The first
3 is timeliness issues. I was first notified
4 about a Dow 83.14 on 9/6/06 by LaVon Rutherford
5 of NIOSH, and a litmus case candidate was
6 tentatively identified. I was informed that
7 ORAU would construct a class definition and
8 select a final litmus case in the next 30 days.
9 Sixty-two days later I was informed the first
10 litmus case, a worker who first filed a claim
11 in August of 2001, started after the end of the
12 covered period of 1957-'60 and therefore had
13 been rejected.

14 Mr. Wieder received his Form A from NIOSH on
15 November the 14th, 2006. Court reporter
16 verbatim transcripts, McKeel Powerpoints and
17 videotape recordings of three July through
18 August, 2006 Dow worker meetings that included
19 a NIOSH outreach meeting were delivered to
20 NIOSH in November of 2006. Mr. Wieder returned
21 his signed Form A with 37 affidavits to NIOSH
22 on November the 27th, 2006. Affidavit seven of
23 that batch refers to thorium shipments to Rocky
24 Flats, and affidavit number nine of the same
25 batch gives details about thorium source terms

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1 that differ markedly from the NIOSH evaluation
2 report as listed on page 13 of the 18-page
3 report.
4 The SEC evaluation report and presentation to
5 the Board was postponed by NIOSH shortly before
6 the December, 2006 Naperville, Illinois
7 meeting. And then the SEC 79 petition was
8 qualified on December the 14th of '06 and
9 published in the *Federal Register*.
10 Early in the next year, on January the 30th,
11 NIOSH and Mr. Hinnefeld sent Dow Midland
12 headquarters a request, and in the request the
13 letter mentioned monitoring data, source term
14 data, operations data and information related
15 to magnesium/thori-- thorium alloy shipments
16 from 1957 to 1998 relating to the Dow Madison,

17 Illinois site. The Dow SEC evaluation report
18 and presentation to the Board was postponed for
19 a second time by NIOSH shortly before the
20 February 7th to 9th Mason, Ohio meeting. Four
21 new NRC reports had emerged.
22 A Dow SEC update session was held February the
23 8th, 2007 at the Board meeting, and a 7384W
24 subpoena to obtain Dow Madison records was
25 discussed, and the Board tasked SC&A to become

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1 familiar with Dow SEC records.
2 After that time the delays in getting reports
3 seemed to accelerate, if a delay can
4 accelerate, but the rate of my receiving things
5 late increased. For example, three redacted
6 Dow worker meeting transcripts from July/August
7 of 2006 were posted on the OCAS web site
8 between April 17th and 19th of this year. The
9 Dow SEC petition with the first 37 affidavits
10 was posted on the OCAS web site after months of
11 redaction. The Dow second set of 29 new
12 affidavits was posted on the OCAS web site on
13 April 18th. Those affidavits are extremely
14 important because in them 11 additional workers
15 testify that Dow shipped truckloads of
16 magnesium/thorium allow to Rocky Flats in
17 Colorado. NIOSH did not challenge the
18 credibility of the second set of affidavits.
19 The SEC 79 evaluation report was finally posted
20 on OCAS web site April 19th, 2007. And Larry
21 Elliott had kindly sent me an electronic copy
22 on the 13th and a hard copy by FedEx on the
23 19th.
24 Four members of the Illinois Congressional
25 delegation requested the Board extend the Dow

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1 SEC class definition to cover the 1961-'98
2 residual uranium period on April the 27th. And
3 on that same day, at midnight, Dow Midland
4 posted a 52 megabyte zip-compressed archive
5 with hundreds of documents on an FTP server at
6 midnight, minus any index or explanation of
7 what the documents represented. I was not sent
8 that document. I got a copy by being alerted
9 by Robert Stephan and Joe Cuzmarazak. What is
10 -- was of great interest to us was the previous

11 year, in 2006, SINuW had had independent
12 negotiations with Dow for the same set of
13 documents, and we had gotten no responsive
14 records at that time.
15 On February the 8th, 2007 the Board meeting
16 transcript was posted that contained the
17 records of the -- of the Dow SEC update
18 session. That was posted on April the 30th in
19 the afternoon.
20 And then finally I got an e-mail from Larry
21 Elliott that the new Dow files that NIOSH had
22 received on the 27th of April might cause NIOSH
23 to ask the Board to delay a vote on the SEC
24 petition on May the 3rd. We strongly oppose
25 that and I'm very happy to see that we have now

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1 brought the petition evaluation report to the
2 Board today.
3 The second issue that I want to mention about
4 is some comments about the evaluation report
5 itself that was posted on the web site on the
6 19th of April. We developed 22 specific
7 concerns with this report that translated into
8 14 specific questions that were presented to
9 Larry Elliott and NIOSH on the 16th. A copy is
10 attached of these concerns and questions, and
11 they should be carried as an integral part of
12 this presentation.
13 Eight of the 14 questions were treated by NIOSH
14 as FOIA requests. SINuW has requested that
15 this decision be rescinded for the air
16 monitoring and the dose rate data and the
17 references, and that these data and reports be
18 sent to me immediately as part of the SEC
19 petitioner openness process. I regret that I
20 still have not had these records.
21 The following points were most disturbing after
22 the long wait and late arrival of the
23 evaluation report: One was the limitation of
24 the class to 1957-'60, and exclusion of the
25 uranium residual period, which we didn't

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1 believe was adequately justified.
2 Two, the important negotiations with Dow
3 Midland and David Burnick* and Kirkland and
4 Ellis for Dow Madison records was not even

5 acknowledged or described as to outcome.
6 Third, the crucial affidavit testimony
7 regarding a close working relationship between
8 the AEC, Rocky Flats and Dow Madison site for
9 thorium allows was overlooked, an inexcusable
10 oversight and rebuff to the workers and to all
11 the people that carefully prepared the site
12 expert testimony. Note that there is no Dow
13 site profile, and that the Dow site-specific
14 appendix to Badelle (sic) TIB-6000 which Stuart
15 just mentioned will not be forthcoming. There
16 won't be an appendix for uranium on TIB-6000.
17 This was according to Larry Elliott in a
18 conversation with Dr. Lewis Wade on April the
19 17th where we were talking about the SEC
20 arrangements. The rationale for not including
21 a Dow-specific appendix to TIB-6000 does not
22 make sense to me. We -- we disagree strongly
23 with NIOSH that ORAU-OTIB-04 Rev. 2 -- we
24 disagree with NIOSH that ORAU-OTIB-4 Rev. 2 is
25 adequate to reconstruct uranium doses at Dow

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1 because this technical document does not
2 adequately cover exposures to uranium extrusion
3 and rod-straightening in the rolling mill
4 section, or to uncharacterized known impurities
5 and chemical composition shifts in the uranium
6 ingots that Mallinckrodt produced. It does not
7 cover exposures to collate -- co-located
8 thorium-232 dust from the 1998 cleanup by USACE
9 -- that's the Army Corps of Engineers. So
10 although OTIB-4, which was mentioned in the
11 report, does cover uranium, we would agree with
12 Stuart and NIOSH that -- that there must be a
13 document like OTIB-6000 that covers the
14 extrusion and rod-straightening procedures.
15 But unfortunately, as I just mentioned, there
16 won't be an appendix specific for -- for Dow
17 about this.
18 Third item is the extension of the class
19 definition period to cover the uranium residual
20 period. As of 4/26/07 the Madison site has
21 submitted 322 Part B and E claims, 278 cases
22 representing 261 unique individuals, with 107
23 cases having been referred to NIOSH. Only two
24 dose reconstructions have been performed since
25 2001, and one claimant has been paid. Claims

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1 have been submitted for workers from all the
2 owners, including Dow, ConAlCo and Spectrulite.
3 OCAS acknowledged repeatedly that petitioner
4 McKeel is interested in having the SEC cover
5 the residual contamination period from 1961 to
6 1998 in addition to the operational period, the
7 contract period of 1957-'60 for Mallinckrodt
8 experimental uranium extrusion and rod
9 straightening work. Approximately 70 claims,
10 41 of which have SEC cancers, will be covered
11 under a 1957-'60 class definition; whereas the
12 broader Dow class from 1957 to 1998 that I'm
13 asking for would include at least 23 additional
14 workers, including the candidate litmus
15 claimant who filed in August 2001 and whose
16 Part B claim is still pending. The exact
17 number covered under a 1957-1998 extended SEC
18 class is still unclear, and NIOSH is updating
19 those figures for the Board. On February the
20 8th, 2007 Larry Elliott acknowledges in the
21 public session that EEOICPA does not preclude
22 SEC coverage of the residual uranium period,
23 and that this period is covered for ordinary
24 dose reconstructions. The legal department
25 opinion that restricts NIOSH to doing dose

P. 40

1 reconstructions under SECs to just the covered
2 contract period and not the residual period is
3 cited in e-mails and so forth, but has never
4 been documented as being a written policy by
5 NIOSH by a named person on a particular date
6 that we have seen. The NIOSH SEC evaluation
7 report admits that regular EEOICPA claims can
8 be compensated for 1957 to 1998, but limits the
9 SEC class definition to 1957-'60 with what we
10 feel is a flawed and hard-to-grasp explanation.
11 And as I've mentioned, both U.S. Senators from
12 Illinois and two U.S. Congressmen from Illinois
13 have joined in a bipartisan request to NIOSH to
14 extend the class coverage out to 1998.
15 Now we come to that very important -- the
16 fourth point, which is Dow Madison
17 relationships with the Atomic Energy Commission
18 and thorium production and residual
19 contamination thorium. The U. S. Army Corps of

20 Engineers FUSRAP 2000 report contention that,
21 quote, no Dow Madison site thorium work was
22 AEC-related, end quote, cannot -- cannot be
23 backed up by any primary document, as
24 determined in a June, 2006 face meeting between
25 USACE, SINuW members and Congressman Shimkus's

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1 office in the Army Corps of Engineers' St.
2 Louis district office. The Corps did find
3 uranium and uranium dust being colla-- co4
located above the extrusion press rafters in
5 building six, and the reason for that of course
6 was that the same extrusion presses, the light
7 press and possibly the heavy press, were used
8 for both types of extrusion, so you expect to
9 have a mixed contamination above the presses.
10 We contend the AEC and commercial thorium
11 streams at Madison site are not separable, and
12 hence thorium should be calculated in dose
13 reconstructions throughout both residual
14 uranium and thorium contamination periods that
15 extend at least up to 1998. In addition, 11
16 Dow workers provided sworn notarized affidavits
17 to the effect that the Madison plant shipped
18 truckloads of thorium/magnesium metal alloy to
19 Rocky Flats and the S-- and the AEC. These
20 affidavits go unchallenged for credibility by
21 NIOSH at the time of submission. SINuW
22 strongly argues that the affidavits are both
23 credible and were neither coached nor
24 anecdotal, as characterized unofficially by
25 NIOSH, but never in writing to the petitioners

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1 McKeel and Arthur Wieder. McKeel and SINuW Joe
2 Cuzmarazak pro bono attorney strongly protested
3 characterization of Dow affidavits as being
4 coached or anecdotal. This was done in writing
5 to the Advisory Board Chair and to Dr. Wade as
6 the Designated Federal Official. The Illinois
7 delegation agrees. Dow Midland documents
8 received 4/27/07 -- and this is probably the
9 most important thing I can say to you today,
10 and I'll show you in the slide -- upcoming
11 Powerpoint slide presentation that those
12 documents that we got late on 4/27 prove that
13 Dow Madison provided centered magnesium, slide

14 number one, and magnesium/thorium allow, slide
15 number two, to Mallinckrodt Chemical Works
16 uranium divisions for their operations, and to
17 the AEC, and I will show those slides in a
18 short period. In addition, there is a Pangea
19 Group May 25th -- I'm sorry, June, 2005 thorium
20 inventory, slides three and four, that shows
21 widespread residual thorium metal throughout
22 former Dow plant buildings complex. Remember,
23 the FUSRAP report and the uranium cleanup was
24 restricted to building six. This report was
25 generated as Dow Madison is commissioning its

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1 current thorium license, Illinois 01750, with
2 the Illinois Emergency Management Agency.
3 Finally, my fifth point is that there has been
4 extreme harm to the workers, including
5 beryllium exposure at the Dow Madison plant.
6 Dow reports such as that by Silverstein* in
7 1957 and the 1960 AEC inspection report, which
8 we have not gotten but as reported in the
9 evaluation report, suggest that the mouse --
10 Madison site had an active, well-honed
11 radiation safety program. Nothing could be
12 farther from the truth as revealed by extensive
13 worker affidavits and meeting transcripts,
14 including the NIOSH outreach meeting held in
15 Collinsville, Illinois on 8/22/06. This was a
16 session where workers passed the microphone
17 down the rows and gave their testimony freely.
18 The risk of handling uranium, and especially
19 thorium and beryllium, were downplayed to the
20 Dow Madison workers, and even to supervisors,
21 by the plant management. There were numerous
22 magnesium and numerous thorium-related fires
23 and explosions, and worker injuries and even
24 deaths. OSHA was called in for many of these
25 incidents, and I'm sure will have appropriate

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1 reports. There were periodic special metal or
2 what's called PE, metal extrusion and rolling
3 mill runs -- and I should note that photo
4 engraving plates were a major Dow product --
5 where workers asked but were not told the true
6 nature of the metal they were working with.
7 They guessed it was some sort of thorium

8 compound based on the telltale behavior of the
9 ingots in the heated extrusion process. There
10 is, as Stuart mentioned, no individual
11 dosimetry data for Dow that's been produced by
12 -- by DOE or NIOSH. We've checked with
13 Landauer, and Dow Midland could not provide
14 any. The workers indicate that badges were, as
15 they put it, cosmetic, being worn for certain
16 inspections and then discarded without,
17 according to the workers, being read. None of
18 the workers ever had any feedback about any
19 dosimetry to themselves. Badge use was rare
20 before 1986. The workplace at Dow was dirty,
21 with high amounts of thorium-rich fumes and
22 smoke from the pot room that spilled over to
23 other buildings and even led to plant shut24
downs, the smoke was so bad at times. The
25 workers handled large quantities of pure

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1 thorium and beryllium metal as alloy components
2 from the 1950s through part of the 1990s. And
3 very recently a worker wrote me and said that
4 at least 20 pounds of beryllium were added to
5 most all aluminum alloy runs, and those
6 aluminum alloy runs continue today. Dr. Lar
7 Fuortes at the University of Iowa is studying
8 at least ten former Dow workers for respiratory
9 illnesses to rule out chronic beryllium lung
10 disease and/or pulmonary disease, especially
11 fibrosis, that are related to thorium exposure
12 that is apart from malignancy. The Dow plant
13 produced lacalloy*, which is a
14 beryllium/aluminum metal, starting in 1963.
15 Besides the FUSRAP uranium cleanup in 1998 in
16 building six, the affidavits and meeting
17 transcripts record many private cleanups at the
18 Madison site, and workers were involved in
19 those private cleanups and got episodic high
20 exposures during those cleanups. Two major
21 cleanups were ones in 1993 when ERG of
22 Albuquerque, New Mexico removed more than 850
23 railcars of magnesium/thorium sludge off-site
24 to Utah. And a second private cleanup includes
25 the current Pangea thorium license

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1 decommissioning cleanup that is ongoing.

2 Now if we can turn to the slides, let's see if
3 we can get them going forward here. Let's see
4 -- can somebody help me?
5 (Pause)
6 Okay. Now I -- the first slide I want you all
7 to please look at, and you'll have to look at
8 these on the screen, unfortunately -- oh, no.
9 For some reason this Powerpoint won't display
10 pictures, and that's going to be -- so what I -
11 - can somebody help me with this projector,
12 please? I have a PDF file which will show
13 these with the pictures. I can't imagine that
14 problem, but you must see the pictures, so --
15 so what I need is to get out of this...
16 (Pause)
17 All right. Sorry for the interruption. Now if
18 I can get you to please turn to the slides, I -
19 - I can just -- I can just -- can -- can you --
20 can you change these like this? Okay, that'll
21 be good.
22 (Pause)
23 So I want to turn -- this is probably the most
24 important slide on the screen. The Department
25 of Energy has two major databases that are

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1 available to characterize EEOICPA sites. One
2 is the considered sites database, and this is
3 the database that contains all of the
4 administrative record documents, for instance,
5 on cleanup, the FUSRAP reports. But the other
6 database, the Bible, if you will, is the
7 facility list, Department of Energy, EEOICPA,
8 and the listing in that database for the
9 Madison site includes this facility description
10 today, that's the point.
11 Facility description. The Dow facility in
12 Madison, Illinois supplied the AEC with
13 materials, chemicals, induction heating
14 equipment and metal magnesium metal products
15 and services. So I -- I must stress, Dow
16 facility in Madison supplied the AEC with metal
17 magnesium metal products. Dow received a
18 purchase order from the Mallinckrodt in March,
19 1960 -- well, that's an error right there
20 because the uranium work was done between '57
21 and '60, so this date is wrong, but that's
22 relatively minor -- for research and

23 development on the extrusion of uranium metal
24 and rod. Note this description does not
25 include anything about the thorium AEC work

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1 which I'm going to show you in the next few
2 slides.

3 (Pause)

4 Okay. All right, the next slide is a purchase
5 order, and as you can see, the date is October
6 the 28th, 1957. This is on Mallinckrodt
7 Chemical Works uranium division head. It's --
8 it's under -- it gives the AEC contract number.
9 It's to the Atomic Energy Commission, and I'll
10 show you the details of it, but it's about
11 magnesium metal.

12 This is a blow-up of that slide, so Dow Madison
13 was supplying -- oh, and I -- to make sure you
14 saw that. It's -- it's hard to read, but this
15 is -- this is the Dow plant office in Brentwood
16 Boulevard, but it's for the Dow Madison site.
17 And what Dow is supplying to the AEC is cell
18 magnesium. They give the type and here below,
19 some more cell magnesium chipped to a coarse
20 particle size, and there are 100 pounds of each
21 of those.

22 So that's the proof that Dow supplied magnesium
23 metal to Mallinckrodt now, and -- but they also
24 supplied magnesium alloy to -- to the AEC. And
25 what I'm going to show you is the magnesium

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1 alloy was thorium-containing. So this is the
2 direct link between thorium and the AEC.
3 Again, this is Dow Chemical that we're talking
4 about in Madison, Illinois. Mallinckrodt
5 Chemical Works uranium division purchase order
6 for the AEC under the AEC contract, and this is
7 the same contract that covered the uranium
8 work. I apologize that I -- you can't see that
9 better here, but the -- the original documents
10 are being submitted in writing to the Board as
11 soon as I finish this presentation, so you'll
12 have them.

13 Now this is a blow-up of this -- of this second
14 contract purchase order, if you will, and that
15 shows that AEC was being supplied by Dow
16 Madison with magnesium alloy plate. So this is

17 not magnesium metal, this is magnesium alloy
18 plate, and you can see here a number, and I'll
19 show you that a little bit blown up down here.
20 So it says magnesium alloy plate, and then
21 there is a number. And the numbers of alloys
22 are important because there's an ATSM (sic)
23 standard nomenclature for metal alloys.
24 And what you ca-- I -- I can't see what this
25 is. I don't know what that is. What I can see

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1 here is 21A -- it looks like XA, and that looks
2 like a T, so this doesn't mean anything to me,
3 but the 21A means quite a lot.
4 Now this is another document, and I should
5 mention that those two documents just shown to
6 you -- I apologize but I want to make sure you
7 see this -- these are documents that were
8 supplied to Robert Stephan, to Joe Cuzmarazak
9 pro bono attorney and to NIOSH and to Stuart
10 Hinnefeld on April the 27th of this year in
11 that big 52-megabyte zip file. And notice that
12 this number at the bottom, TDCC322, that's the
13 Dow Midland document number, so this is a
14 product of that long search that Stuart
15 described.
16 And this is another document in the same set
17 from Dow Midland, document TDCC318, I believe.
18 It's hard to see from this Powerpoint slide.
19 Now this is a third document that we got from
20 Dow Midland, and what this is is a table in one
21 of their reports that shows the composition of
22 the various alloys that the magnesium mill
23 produced. And I want to draw your attention to
24 these three right here in the middle with the
25 red bar, and to the content of those man--

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1 manganese, Mn percent, and Th, or thorium,
2 percent, and that's blown up here at the
3 bottom. And the one of particular interest --
4 all of these are thorium alloys. H in the
5 standard nomenclature refers to thorium. And I
6 want to draw your attention in particular to
7 thorium/manganese/magnesium alloy 21A. The
8 manganese maximum percent is .45 to 1.1
9 percent, the thorium percentage as listed here
10 is 1.5 to 2.5 percent, and the source of that,

11 again, was Kirkland and Ellis who are the
12 external counsels for the Dow Chemical Company.
13 I mentioned to you, and I showed this in
14 February to the Board, that there -- the Pangea
15 Group of St. Louis has been cleaning up the Dow
16 Madison site for the last two and a half years,
17 and these are the -- these are just two pages
18 from their June 2005 report showing the thorium
19 inventory throughout many of the buildings at
20 the Dow Madison complex. Building one, four,
21 five, six, seven, eight, nine and the machine
22 shop and building ten. And I would note that
23 this is various forms of thorium metal, and
24 they're all throughout the plant.
25 So the summary of this slide session is as

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1 follows: The Dow Madison site contracted for
2 uranium work with the AEC via Mallinckrodt
3 Chemical Works during 1957-'60, and the Dow
4 Madison plant supplied the AEC and Mallinckrodt
5 with centered magnesium and magnesium H21A
6 thorium alloy during 1957 and 1958, and the
7 commercial and the AEC thorium waste streams
8 are inseparable in the still-contaminated
9 sites. Therefore, we believe that the Dow SEC
10 should cover 1957 to 8 (sic) throughout the
11 uranium and thorium production and residual
12 periods.
13 Well, let's just -- let's just leave that up
14 there. I don't know how to turn it off.
15 So my final concluding remarks are the
16 following: I believe the Dow Madison Section
17 83.14 class should be extended from 1957 to '60
18 to 1957 to '98 to cover at least the uranium
19 production and residual contamination periods.
20 Because of the AEC-related thorium work with
21 Mallinckrodt and Rocky Flats, which I hope I've
22 proven to you existed, and given the fact that
23 commercial military and thorium waste streams
24 cannot be separated, nor can the thorium be
25 separated from the uranium dust during the

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1 residual period, we believe the SEC should also
2 include both the uranium and thorium residual
3 contamination period because they're all
4 intermixed. Thorium contamination continues

5 even today. The Dow Madison workers were
6 definitely severely harmed at this site for
7 decades related to their AEC work. They
8 deserve to be honored by extending the SEC
9 class to cover the full period of harm they
10 have been subjected to for -- for decades.
11 And finally, I'll leave you with just two
12 quotes from sworn affidavit number seven, from
13 two long-time Dow Madison workers. One worker
14 said I worked with the thorium from the first
15 time they run it to the last time when I
16 retired in 1990. I figure -- and the second
17 quote is, from the second worker, I figure the
18 thorium work started in '51 and it ended in
19 about 1998, is when they had the last slabs
20 over in the mill to be processed.
21 So that's the end of my presentation and I
22 thank you very much. And Dr. Ziemer, I'd like
23 to give you a copy of the -- (off microphone)
24 (unintelligible).
25 **DR. ZIEMER:** Thank you very much, Dr. McKeel,

Footnote: The "unintelligible" statement made by Dr. McKeel to
Chairman Ziemer was "my 23 page presentation that I would like
to be made part of the record." McKeel later asked that this
document be posted to NIOSH Dow Docket 113.

TESTIMONY OF DEBRA DETMERS, OFFICE OF IL REPUBLICAN
CONGRESSMAN JOHN SHIMKUS, pages 54 through 58

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1 and we'll make sure the full script gets both
2 to the Board members and onto the web site.
3 Next we will hear from Deb -- Deb Detmers, and
4 Deb, as was indicated previously, is a staff
5 member from Representative Shimkus's office,
6 and I think we're also going to read into the
7 record something from Representative Costello?
8 **MS. DETMERS:** I -- I am, thank you.
9 **DR. ZIEMER:** Yes, thank you.
10 **MS. DETMERS:** I'm going to do that first,
11 actually. Congressman Costello sent a letter
12 for the record, and Congressman Costello's our
13 colleague from the metro east area, showing the
14 bipartisan effort of this.
15 (Reading) I want to thank Chairman Ziemer and
16 the members of the Advisory Board on Radiation
17 and Worker Health for the opportunity to submit

18 testimony regarding the Dow Chemical Company
19 Special Exposure Cohort 00079 petition under
20 evaluation. I strongly support this petition
21 and ask the Board to give it a fair and
22 thorough review.
23 As you are aware, the National Institute of
24 Occupational Safety and Hazard (sic) submitted
25 an SEC evaluation report on -- report petition

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1 on April 13th, 2007. The report addresses
2 atomic weapons employees at the Dow Chemical
3 Company in Madison, Illinois who worked at
4 least 250 days from January 1st, 1957 through
5 December 31st, 1960. This petition is a
6 resource providing critical information in
7 order to bet-- in order to better understand
8 the full extent of the workers' exposure to
9 chemicals and radiation.
10 It is my understanding that NIOSH has 75 claims
11 within this covered time period, and a total of
12 116 active Dow cases. While I realize this
13 meeting today is to examine the covered time
14 period, the residual contamination period
15 cannot be ignored. Therefore I urge the Board
16 at some point in the near future to conduct a
17 full examination of Dow Chemical petitions to
18 ensure no employees are wrongly denied workers'
19 compensation. These workers who are exposed to
20 hazardous chemicals and radiation, as well as
21 their beneficiaries, deserve quick action.
22 Too many workers at Dow have waited years for
23 help, and they deserve a comprehensive review
24 without further delay. I look forward to
25 working with the Advisory Board on worker

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1 compensation issues at Dow Chemical, and will
2 continue to work with my colleagues in the
3 House and the Senate to ensure our nation's
4 atomic workers and their families receive the
5 benefits they deserve.
6 Jerry Costello, Member of Congress.
7 You -- you heard from my boss yesterday, he's
8 the one who called in from the airport, so I'm
9 not going to repeat everything he said. And
10 I'm only going to talk very briefly.
11 I became involved in this six years ago when

12 two men walked into my office, [Name Redacted]
13 and Bill Hoppe. I didn't know anything about
14 this program. I didn't even know what NIOSH
15 was. But I've learned a lot in six years. I
16 know these workers personally. I've been to
17 all of their meetings. I have been to their
18 reunions. I have been to their houses. I've
19 been to their funerals. I have heard the same
20 stories for six years. I've heard the same
21 stories independently for six years. I've
22 heard the stories of thorium for six years.
23 These affidavits that these men have provided
24 are credible and valid. These men -- even at
25 the workers' meetings, if somebody says

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1 something and one of the other guys questions
2 it, they will correct each other. These --
3 they do not know how to lie. These are not men
4 who know how to lie. They are telling the
5 truth of what happened at that plant.
6 I don't want the Board to dismiss this because
7 of lack of documentation. No stone's been
8 unturned in trying to get to get to this
9 documentation. Dr. McKeel and I sat at the
10 state EPA and went through tons of dusty
11 documents. We've sat with the federal EPA.
12 We've sat with IEMA, which is the Illinois
13 Emergency Management Association. We've been
14 to the Corps of Engineers library. We've
15 recently gotten -- went through 400 pages of
16 Dow documents. We have FOIA requests that
17 haven't been answered yet. Every effort to get
18 documentation has been made.
19 I think -- we have the scientific evidence that
20 Dr. McKeel presented. We have very true
21 affidavits from these men. And I urge you
22 today to extend this SEC -- to the residual
23 contamination period through 1998.
24 And I want to -- or I urge you that the time is
25 today. The time isn't the next Board meeting.

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1 The time isn't down the line. The time I think
2 to do this is today. Thank you.

TESTIMONY OF ROBERT STEPHAN, STAFF OF IL DEMOCRAT
SENATOR BARACK OBAMA, pages 58 through 65

Begins P. 58, line 3

DR. ZIEMER: Thank you very much. Then we'll
4 hear from Robert Stephan, who's from Senator
5 Obama's office.

6 **MR. STEPHAN:** Thank you, Dr. Ziemer. First I
7 have a statement from Senator Durbin's office
8 that I would like to read into the record, if
9 that's okay.

10 **DR. ZIEMER:** Yes.

11 **MR. STEPHAN:** It's addressed to you. It says
12 (reading) Thank you for your kind consideration
13 of this matter before the Advisory Board on
14 Radiation and Worker Health in expanding the
15 class to cover workers employed during the
16 residual period, through 1998. I have met with
17 the workers who provided the affidavits, and
18 have listened to their stories. Especially in
19 this case where there is little documentation
20 to challenge their accounts, I hope you will
21 give the affidavits provided their full
22 consideration.

23 In addition, I'm hoping for a prompt resolution
24 of this matter and these workers' claims. The
25 SEC process has been pending for months, and

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1 due to the health and age of many of the
2 workers, it is imperative that the Board
3 promptly consider the merits of the case.
4 Thank you for permitting me to raise these
5 issues, and for your service on this Board.
6 Sincerely, United States Senator Dick Durbin.
7 Dr. Ziemer, I just want to go into a little bit
8 more detail in terms of how the Senator views
9 this. You know, he called in the other day,
10 but he just wants to kind of summarize this
11 down to how he sees this. Okay? And hopefully
12 -- I want to make it an assumption here, I
13 supposed, but hopefully the 83.14 is going to
14 be approved, so we're kind of focusing in on
15 this residual period here. And I do want to
16 give credit where credit is due to NIOSH.
17 Certainly our office has been very tough on
18 NIOSH at times, Larry and Stu and everybody
19 else can attest to that. But we have to be

20 fair and give credit when it's due, and they
21 have done a good job in recognizing at least
22 the '57 through '60 period, and in working with
23 us on this issue.

24 So to -- to square this up as to where we are
25 now, let's -- let's go back to the February

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1 meeting that was in Cincinnati, Ohio -- okay? -
2 - and just go through some of those comments
3 there that -- that I think brings us to where
4 we are now and we'll kind of focus this down,
5 at least from the Senator's point of view, and
6 hopefully we can come up with some sort of a
7 resolution.

8 Obviously the issue is did Dow Madison produce
9 AEC-related -- deal with AEC-related thorium
10 after 1960. Okay. So, and if they -- and if
11 they provided it to Rocky Flats or Mallinckrodt
12 -- mainly Rocky Flats is what we've been
13 talking about -- then that, in and of itself,
14 is pretty good evidence of AEC-related thorium
15 at Dow Madison after 1960. So from the
16 transcripts -- the meeting transcripts of the
17 Advisory Board from February, quoting Larry
18 Elliott, you know, let's be clear that this
19 goes to the covered facility description. The
20 covered facility description, that is DOE and
21 DOL's responsibility to set in place. It is
22 our understanding at NIOSH that the
23 documentation that has been provided by the
24 DOE, reviewed by DOL and reviewed by our folks,
25 both in the general counsel's office and our

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1 technical staff, do not find any linkage of AEC
2 work after the covered period of '57 to '60.
3 We have to go by that unless there's another
4 document produced that indicates otherwise. We
5 are bound by the law and the regulations to
6 only reconstruct the AEC portion of that dose.
7 Then continuing to quote Larry, and we've been
8 talking about these -- these affidavits, so
9 this is NIOSH's position as I understand it, on
10 the record, quoting the February transcripts.
11 We do not question the veracity or the validity
12 of the affidavit comments that have been
13 provided to us. Again, we do not question the

14 veracity of the affidavit testimonies about
15 working on thorium. We understand they worked
16 on thorium. This was a dirty place. It was a
17 dirty operation. We don't quibble about the
18 facts that these folks -- these fine folks were
19 put in harm's way, et cetera, et cetera, et
20 cetera.

21 So if we're -- according to Larry Elliott
22 still, so if we're going to take up a
23 discussion about the covered facility
24 description, I think you need to employ in that
25 discussion Department of Energy and Department

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1 of Labor. NIOSH has no responsibility or
2 authority in that regard.

3 So what's the point. The point is, NIOSH has
4 done their job. NIOSH -- NIOSH has done what
5 NIOSH is bound to do. So -- and we -- and we
6 appreciate that. So where do we go from there,
7 and where we go is to the site description that
8 Dr. McKeel went through. We go to the DOE and
9 we say give us documents to show us how you
10 came up with your site description for AEC11
11 related thorium from '57 to '60. You can't
12 just tell us that's what it is. You have to
13 give us something. It's not going to work just
14 saying we're the Department of Energy and this
15 is what it's going to be.

16 So what did they give us. They gave us a
17 FUSRAP report. The FUSRAP report references
18 itself. There's nothing in the FUSRAP report
19 that shows why they say that. So where does
20 that take us? Well, that takes us down --
21 after all of this, after all NIOSH's work,
22 after all the work that Dr. McKeel and SINuW
23 and two Congressmen and two Senator's office
24 and all of your work, where we are today is a
25 he said/she said -- a he said/she said between

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1 the Department of Energy and -- unless I'm
2 missing something, and I don't think that --
3 that we are, after Stu's presentation -- a he
4 said/she said between the Department of Energy
5 and, to a lesser extent, the Department of
6 Labor and 11 affidavits from the workers, that
7 NIOSH does not question, that say thorium was

8 shipped to Rocky Flats. One of those workers
9 worked in shipping and attested the fact that
10 he saw the shipping manifest to -- sending
11 thorium to Rocky Flats beyond 1960. So -- and
12 that -- and that's what Dr. McKeel showed you.
13 So that's where we are, and I just want to make
14 sure that -- for the record, I think you all
15 understand this perfectly, but for the record,
16 that's what this is about. This is a he
17 said/she said between the Department of Energy
18 and at least 11 workers from Dow Madison and
19 this -- in the Senator's view and this is why
20 he wanted me to make this point -- this is a
21 critical moment in the history of this Board.
22 Do we take the statements of workers over
23 statements of -- from the Department of Energy
24 that cannot be backed up by documents.
25 Now it has been said that the workers'

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1 testimony cannot be backed up by documents.
2 The Department of Energy testimony can't be
3 backed up by documents. They have a report
4 that they wrote that -- FUSRAP, the FUSRAP
5 report, that USACE wrote that -- that
6 references itself, so they don't have a
7 document, either. So in this -- in this whole
8 dialogue of not having documents, they don't
9 have any documents, so that doesn't count. The
10 FUSRAP report doesn't count. So what are we
11 going to do, is the question. What is the
12 Board going to do? You can cover the residual
13 period. Are we going to take worker testimony
14 at face value or are we not going to take
15 worker testimony because the Department of
16 Energy references a document that references
17 itself.
18 So in the Senator's eyes, that's where we see
19 things today. We really hope, as much as you
20 possibly can, that you will act on this
21 residual issue today and not put it off until
22 August or -- or September or whenever the next
23 Board meeting is. We -- we really want to move
24 on this today, put this issue to rest. These
25 are 23 additional workers we're talking about,

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1 and move on.

2 So appreciate your time. We appreciate your
3 efforts, Larry and Stu and everyone at NIOSH.
4 I wish Libby White were here today to discuss
5 this issue from the Department of Energy 'cause
6 I presented this to her and so -- you know, I
7 take the Department of Energy's absence to mean
8 that they don't question what I just said about
9 their report, so I just want to make sure that
10 that's in the record. Thank you.

DR. MCKEEL MAKES FURTHER CO-PETITIONER REMARKS,
Pages 65 through

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11 **DR. ZIEMER:** Thank you, Robert. And I'm -- I'm
12 going to ask if there are any other petitioners
13 or maybe -- maybe you know, Dr. McKeel, if --
14 is there anyone by phone that --

15 **DR. MCKEEL:** I don't believe so. I -- I just
16 had one sentence to add --

17 **DR. ZIEMER:** Please.

18 **DR. MCKEEL:** -- and I apologize, but I forgot
19 to say this. But on February the 23rd of this
20 year I wrote Glenn Podonsky* at DOE a very
21 detailed letter about just this issue of the
22 facility description and the error that's on
23 the -- that I just showed to you in the
24 Powerpoint slide presentation. I have gotten
25 back a -- what I would characterize as a

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1. partial answer, but really that missed the
2 entire point of the thorium connection that
3 they themselves note on the facilities list.
4 So just to make it complete, I really think
5 we've tried to do what the Board admonished us
6 to do, what Larry Elliott asked us to do.
7 We've sought the guidance from the proper
8 agencies. I sent copies of that letter to
9 NIOSH. I've talked to Peter Turcic repeatedly
10 about the facility description and he says go
11 back to DOE. So we've really done that. We've
12 tried in good faith to do what we can do, and I
13 think Robert's right. He's describing --
14 that's where we are today.

Footnote: On January 8, eight months after this Dow presentation
occurred, 2008 Glenn Podonsky form DOE-HSS sent a letter to

Peter Turcic of DOE confirming that Dow Madison met the criteria for a thorium AWE site based on information that thorium alloys produced at the plant probably were used in nuclear weapons production in 1957-58. He also noted that the same thorium alloys were used nationwide in nuclear weapons for a far longer period of time: 1956 through 1969. These conclusions were based on documents from Livermore Lab, a DOE site. The complete set of relevant documents has never been released by DOE to anyone in the EEOICPA program to my knowledge. -- Dan McKeel 2/11/2011.

TESTIMONY BY DOW WORKER BILL HOPPE: pages 66 through 68

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16 **DR. ZIEMER:** Thank you, and I'll just double
check. Are there -- is anyone by phone --
17 petitioners by phone representing Dow?
18 **UNIDENTIFIED:** (Unintelligible)
19 **DR. ZIEMER:** Representing Dow?
20 **UNIDENTIFIED:** Yes.
21 **DR. ZIEMER:** Could you speak up and give us
22 your name again?
23 **MR. HOPPE:** My name is Bill Hoppe.
24 **DR. ZIEMER:** Okay, Bill, right. Did you have
25 some comments, Bill?

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1 **MR. HOPPE:** Yes, we have (unintelligible) more
2 information, you know, than what they gave, but
3 the whole thing is is a lot of it was kept from
4 the (unintelligible) of the workers down there
5 and they -- we didn't really know what -- what
6 we were running in that, but the uranium, they
7 were running uranium down there in '75 on
8 (unintelligible) and they ran uranium
9 (unintelligible) straightening the rods
10 (unintelligible) put over in the
11 (unintelligible) in the rolling mill and it was
12 up in the (unintelligible) and safety
13 (unintelligible) area -- era when they were
14 doing that. And the (unintelligible) of that
15 plant had thorium work done in it or stored in
16 it in that, from the (unintelligible) office
17 where they (unintelligible) all the metal to --
18 all the way through to the finished part when
19 they shipped it out. But (unintelligible)
20 since we've started on this (unintelligible)
21 about six years ago now, we've got over 40
22 people that's died of cancer and they hold out

23 (unintelligible) longer, we'll all be dead.
24 You know, that's the whole thing in a nutshell.
25 If you've got any questions for me, I'll be

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1 more than happy to (unintelligible) answer
2 them.

DISCUSSION OF DOW SEC PETITION EXTENSION TO COVER
THE RESIDUAL CONTAMINATION PERIOD AMONG BOARD MEMBERS,
HHS OFFICE OF GENERAL COUNSEL, DR. MCKEEL, DR. LEWIS WADE,
STUART HINNEFELD AND LARRY ELLIOTT OF OCAS:
Pages 68 through 124

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3 **DR. ZIEMER:** Okay. Thank you very much, Bill.
4 Now Board members, this -- this petition is
5 open for discussion. There -- there appears to
6 be actually two issues. We -- we have the
7 evaluation report to react to or to act on.
8 There is, in a sense, an additional request,
9 which is the issue of extending the covered
10 period.
11 Now I think it's important and we need -- and
12 there may be great sympathy toward that. I
13 think there also is a legal issue and I need to
14 have some definition, perhaps. I don't know if
15 legal counsel can tell us. My understanding is
16 that the -- the definitions of those are -- are
17 not the prerogative of this Board; they are
18 established by Labor. Is that correct, or --
19 maybe somebody could clarify that. I -- I want
20 to clarify what authority this Board has on the
21 issue of defining those periods.
22 **MS. HOMOKI-TITUS:** If you're talking about what
23 periods are covered -- is that what you're
24 asking?
25 **DR. ZIEMER:** The cov-- the covered periods --

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1 **MS. HOMOKI-TITUS:** Are defined by the
2 Department of Labor and the Department of
3 Energy. They are not the prerogative of this
4 Board or of Health and Human Services.
5 **DR. ZIEMER:** So that if the Board -- the only
6 thing the Board could do at that -- at this
7 point would be, for example, to express an

8 opinion to perhaps the Secretary of Health and
9 Human Services to -- an opinion to convey
10 something to those agencies.
11 **MS. HOMOKI-TITUS:** Right, they -- the Advisory
12 Board --
13 **DR. ZIEMER:** But we do not have the authority
14 to change --
15 **MS. HOMOKI-TITUS:** No, you do not have the
16 authority to change it. The Advisory Board
17 could provide a recommendation to the Health
18 and -- the Secretary of Health and Human
19 Services to contact the Department of Energy
20 and the Department of Labor regarding whatever
21 opinion you want to provide.
22 **DR. ZIEMER:** So -- and Dan, you -- you have a
23 comment on that, too.
24 **DR. MCKEEL:** That really avoids the issue.
25 What -- what we are saying, and we back this up

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1. by numerous statements, including [Name
2 Redacted] opinion reading the Act, that there
3 is nothing in EEOICPA, nothing, no wording,
4 that forbids an SEC to cover the residual
5 period. Now that's a flat statement, so I
6 would think that what we need an -- a legal
7 opinion on is is that statement correct or not.
8 I don't think we are impeded -- I don't think
9 you're impeded from covering the residual
10 period.
11 **DR. ZIEMER:** Okay.
12 **DR. MCKEEL:** If you believe that the things
13 that I said were true, that that was AEC work -
14 - intermixed AEC uranium and AEC thorium, that
15 it originated in 1957 to '60 period and
16 extended on up into the future.
17 **DR. ZIEMER:** I think one of the practical
18 outcomes, though, is that whatever this Board
19 recommends goes to the Secretary and the
20 Secretary probably gets back to that
21 definition. So we -- we have to work within
22 those boundaries, but I'm -- I'm trying to
23 assess this myself. Thank you -- please.
24 **MR. STEPHAN:** Ju-- just as an aside here, we
25 have to say for the record, it is insulting to

Footnote: The redacted name in lines 1 and 2 was Richard Miller
of GAP who is now a Congressional staff member.

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1 the workers, it is insulting to you, it is
2 insulting to us. The Department of Labor and
3 the Department of Energy have known for months
4 upon months upon months that we were going to
5 discuss this today, and now no one is here
6 except for possibly legal counsel -- your legal
7 counsel for HHS. So it's just -- it's
8 ridiculous that they left, absolutely
9 ridiculous that they left and now no one is
10 here to engage in this conversation when they
11 knew all along how important this was to us.

12 **DR. ZIEMER:** Okay. Thank you, Robert. Lew,
13 could you add to this?

14 **DR. WADE:** Well, let me try to deal with Dr.
15 McKeel's question. And again, if I'm wrong,
16 please jump up and correct me, counsel or
17 Larry. I think that NIOSH had the ability to
18 include the residual contamination period in
19 its definition, but NIOSH is saying that if you
20 refer back to the 2005 Defense Authorization
21 Act, as amended, that the only radioactive
22 material that we could consider in that
23 judgment was the DOE or the AEC work. And we
24 have determined that we feel we can reconstruct
25 dose for the uranium, and that's what we start

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1 from.

2 **DR. ZIEMER:** And Stu?

3 **MR. HINNEFELD:** Right, we proceeded with this
4 with the understanding that the extrusion of
5 the uranium and the straightening of the
6 uranium was the AEC work that caused this site
7 to be on the list. And you know, we don't --
8 we have not been a party or part of the
9 selection -- you know, identification of Atomic
10 Weapons Employers or what thought process or --
11 or procedure or whatever was employed in the
12 selection of these sites from the outset. And
13 so our -- our understanding was that it was the
14 uranium work that was done that made this, you
15 know, a site, that put it on the -- and so we
16 proceeded along that, that that was the AEC
17 work and that the thorium that was used in
18 their commercial products was commercial work.

19 I mean that's how we proceeded on this.
20 **DR. ZIEMER:** Right, but it -- it seems pretty
21 clear that there was thorium work going on in
22 the early days --
23 **MR. HINNEFELD:** Yes.
24 **DR. ZIEMER:** -- with the AEC. Do we --
25 **MR. HINNEFELD:** Yes, usually --

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1 **DR. ZIEMER:** -- do we have anything that
2 establishes that uranium only was the basis or
3 not? In other words, can one make the
4 assumption that both uranium and thorium work
5 were going on as part of the covered period and
6 therefore carries forward?
7 **MR. HINNEFELD:** I -- I don't -- I don't know.
8 I mean we didn't -- like I said, we didn't
9 participate in the identification of -- of AWE
10 sites and AWE lists, and so we're not really
11 cognizant of the process of what was the
12 thought process that put these sites on this
13 list out of, you know, various companies --
14 **DR. WADE:** But -- but more than the thought
15 process, who has the responsibility for making
16 the definitions and what are the definitions
17 that we're operating to?
18 **MR. HINNEFELD:** The Department of Energy is
19 responsible for designating the sites that are
20 -- that are AWE sites. Isn't that right?
21 **DR. WADE:** Correct.
22 **MR. HINNEFELD:** So they are the ones who make
23 that designation.
24 **DR. WADE:** And what is their designation
25 relative to Dow Madison?

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1 **MR. HINNEFELD:** They describe, you know, what -
2 - what -- I think Dr. McKeel even commented,
3 you know, they describe they did these things.
4 During the time they extruded uranium, they
5 straightened rods, they sold other things,
6 sometimes to the AEC. So that's -- that's what
7 they said in their description.
8 **DR. WADE:** But the covered period for this
9 facility is what?
10 **MR. HINNEFELD:** 1957 to 1960.
11 **DR. WADE:** And within that covered period, what
12 is the definition of the work that was the AEC

13 work?

14 **MR. HINNEFELD:** I don't know that the
15 definition exists anywhere. I mean there's a
16 description of -- of what was done during that
17 period, but I don't know that it goes
18 specifically -- it doesn't specifically say and
19 this site is on the list because of something,
20 so...

21 **DR. ZIEMER:** Yeah, I -- it appears that it's
22 been established that both were going on. I
23 think Dr. McKeel has established that.

24 **DR. MCKEEL:** Can -- can I have -- just -- I'll
25 try to clarify this --

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1 **DR. ZIEMER:** Yes, please do.

2 **DR. MCKEEL:** -- 'cause I've wrestled with this
3 and I -- I want to offer a simple explanation.
4 What I've shown you is additional purchase
5 orders to the purchase orders that the
6 Department of Energy has included in all of the
7 documents about this site as being evidence
8 that Dow Madison did AEC uranium work for
9 Mallinckrodt Chemical Company. I'm saying in
10 that same series of purchase orders we got from
11 -- from Dow Midland, the current company, more
12 documents, more purchase orders that showed
13 that some of the thorium -- some
14 thorium/magnesium alloy work was done for the
15 AEC and Mallinckrodt. So I think the problem
16 here is either that the Department of Energy
17 never got those thorium-related purchase
18 orders, or they're not producing them, or
19 they're lost, or something. But I must say,
20 you know, Dow responded in 2007 to these
21 requests. The program started in 2001. And
22 before -- and to be honest about what's
23 happened here, I don't believe anybody,
24 including the Department of Energy, has thought
25 about approaching Dow Midland until we brought

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1 it up and initiated those discussions in 2006.
2 And so what I'm saying is I think, on the other
3 hand, the Department of Energy clearly knew
4 about these documents because they have on
5 their facilities list that Dow supplied
6 magnesium alloy. Now this is the simplifying

7 explanation. Everybody who's in the metallurgy
8 industry -- everybody -- knows about ATSM (sic)
9 alloy designations. They know about the
10 standard nomenclature of alloys. They know
11 about Hm* and Hk* and all that. That would be
12 immediate; that's a code word to them, thorium.
13 However, when Debbie Detmers and I, for
14 instance, went to the Illinois EPA and we
15 looked up the air pollution permits for the
16 Madison company that -- Dow Madison, we found
17 that their air pollution permit said that what
18 they did at that plant was that they were
19 secondary magnesium and aluminum smelters.
20 Well, it's true that the va-- the -- the bulk
21 of the alloy is either magnesium or aluminum.
22 But what is omitted from the DOE facilities
23 list and what was omitted from those Illinois
24 EPA air pollution permits is that it wasn't
25 pure magnesium, it wasn't pure aluminum. They

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1 were alloyed with things, and one of the things
2 for which Dow was known countrywide was
3 thorium/magnesium alloys. They made it in
4 Bayside; they made it in Midland, Michigan;
5 they made it in Texas City, Texas; and Dow
6 Midland at the same time had a plant out in
7 Walnut Creek, which is an EEOICPA covered site
8 that processed thorium ores for the AEC. So
9 they were doing a lot of thorium work and --
10 and Dow thorium at least Walnut Creek was AEC11
related. So I believe it's a nomenclature
12 matter. I think that whoever wrote that
13 federal facilities description, had they known
14 anything much about metals, metallurgy, alloys,
15 alloy nomenclature, that instead of saying
16 metal magnesium metal products, they would have
17 said metal -- they -- they -- what they should
18 have said is magnesium and magnesium/thori--
19 thorium alloys for the AEC. I mean the --
20 clearly those purchase orders were AEC purchase
21 orders. They were not merely commercial.
22 Now it's also true that everybody now knows,
23 you know, that magnesium/thorium alloys were
24 particularly useful in the aircraft industry,
25 in fighter planes, in rockets, in the space

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1 shuttle, in intercontinental ballistic missiles
2 and -- and Dow provided thousands of tons of
3 magnesium/thorium alloys for that point. So I
4 think it's just a matter of somebody doing a --
5 a good job. What -- what can be faulted,
6 however, I think is what Robert's alluding to,
7 is we have brought that to the attention of the
8 Department of Energy. Now maybe we need to
9 bring it a little more forcefully with a little
10 more evidence, and certainly what the
11 Department of Energy has not seen are these
12 purchase orders that I showed you on the screen
13 from Dow Midland. And we -- we -- well, they
14 need to look at those. But I -- I find it very
15 hard to believe that they would obtain the
16 purchase orders that relate to uranium but not
17 the purchase orders that relate to thorium.
18 **DR. WADE:** But could -- could I ask you a
19 question, just to --
20 **DR. MCKEEL:** Sure.
21 **DR. WADE:** -- clarify this for the--
22 **DR. MCKEEL:** Sure.
23 **DR. WADE:** Because we need to chart a course
24 forward.
25 **DR. MCKEEL:** Right.

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1 **DR. WADE:** The facility description that you
2 put in front of us --
3 **DR. MCKEEL:** Uh-huh.
4 **DR. WADE:** -- that facility description needs
5 to be modified --
6 **DR. MCKEEL:** Yes, sir.
7 **DR. WADE:** -- you -- you propose.
8 **DR. MCKEEL:** Yes, sir.
9 **DR. WADE:** If it's modified, then NIOSH can
10 start with that modified facility description
11 and move forward, so that's the -- the core
12 issue that we're looking at here. Correct?
13 **DR. MCKEEL:** I believe that's the core issue.
14 The -- the exception that I would take to what
15 you just said is I'm not sure -- if the Board
16 accepts the evidence that I have shown them,
17 then I don't see why the Board can't act on
18 that evidence.
19 **DR. WADE:** I understand what you're saying.
20 You're -- you're proposing that the Board could

21 supersede this facility description based upon
22 the evidence you've provided.
23 **DR. MCKEEL:** Right. If I was just saying this
24 from my belief, that would be one thing. If
25 I've shown it to you on the board and --

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1 **DR. WADE:** From my point of view, you've made a
2 very compelling argument.

3 **DR. MCKEEL:** Right.

4 **DR. WADE:** The question is, what is the
5 authority of the Board --

6 **DR. MCKEEL:** Right.

7 **DR. WADE:** -- and that's something the Board
8 needs to discuss.

9 **DR. ZIEMER:** Well, let me ask, is this
10 description -- this is not an official
11 description that is used for the EEOICPA
12 program, is it?

13 **DR. MCKEEL:** Yes, it is, absolutely --

14 **DR. ZIEMER:** This is the one --

15 **DR. MCKEEL:** -- that is your --

16 **DR. ZIEMER:** That's the one.

17 **DR. MCKEEL:** -- that is your King James --

18 **DR. ZIEMER:** That's the one you're --

19 **DR. MCKEEL:** -- Bible.

20 **DR. ZIEMER:** -- using, Stu?

21 **DR. MCKEEL:** That is your King James Bible.

22 **MR. HINNEFELD:** We refer to that web site, the
23 facilities list web site on, you know,
24 questions like this. It occurs to me as we sit
25 here that --

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1 **DR. ZIEMER:** Well --

2 **MR. HINNEFELD:** -- the sites were published in
3 a *Federal Register* notice and there may be
4 additional words in the *Federal Register* notice
5 --

6 **DR. ZIEMER:** Well, we probably --

7 **MR. HINNEFELD:** -- but I don't know whether
8 there are or not.

9 **DR. ZIEMER:** -- need to check that. I -- I --
10 I guess as I look at this, I think the door is
11 open. Here in this description it already says
12 metal magnesium products, and that term is
13 pretty broad. It seems to me one could
14 interpret that broadly. I'm wondering if NIOSH
15 could not even interpret that broadly. Mayb--

16 we might have to get counsel's recommendation
17 on that, but it seems to -- it seems to me that
18 there's a foot in the door right there.
19 **MR. ELLIOTT:** I'm sure we'd have to seek
20 counsel's advice on that. I want to add to
21 what Stu just said in response to your
22 question, that as we encounter these situations
23 where we have questions about what the site or
24 facility designation means for covered
25 exposure, we are obligated to talk and get

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1 coordinated with DOE or DOL on that particular
2 issue, and we've done that with Dow. And --
3 and what we hear back from them, DOE, is that
4 they are basing their designation on the
5 contracts that were engaged with this AWE, and
6 they say those contracts do not show them --
7 only show to them that uranium is the issue --
8 **DR. ZIEMER:** Uh-huh.
9 **MR. ELLIOTT:** -- is the AEC work. Now I'm not
10 saying I agree with that. I'm just saying
11 that's what bounds us to only move forward and
12 work on uranium outside of that covered period.
13 **DR. ZIEMER:** So in -- in a sense, it appears
14 that we're awaiting some additional response --
15 I know -- I've seen copies of Dan's -- McKeel's
16 letters to Glenn Podonsky and a kind of
17 preliminary response that sort of said we're
18 looking into it, or something to that effect.
19 So I don't think that DOE has closed the door,
20 but it certainly will make a big difference if
21 we can have them aboard officially on this.
22 It's -- it's not obvious to me that they are
23 denying that the thorium work took place. I
24 think it has come to them probably as new
25 information, as well, was my impression. Is

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1 that your impression, too, Dan, that --
2 **DR. WADE:** We're going to try --
3 **DR. MCKEEL:** You know, I --
4 **DR. WADE:** -- to get DOE on the phone.
5 **DR. MCKEEL:** -- I would be happy to agree with
6 that, except where did they get the language of
7 metal magnesium --
8 **DR. ZIEMER:** Well -- well --
9 **DR. MCKEEL:** -- they're --

10 **DR. ZIEMER:** -- exactly, and that's what I'm
11 saying, it --
12 **DR. MCKEEL:** What I'm trying --
13 **DR. ZIEMER:** -- sort of leaves the door open
14 anyway, it seems to me.
15 **DR. MCKEEL:** Here -- here's the key thing that
16 I'm trying to say. I -- I actually have -- I
17 mean all I have is a copy from an electronic
18 file sent by Dow Madi-- Dow Midland, but it is
19 -- it -- it names the AEC contract as being the
20 same contract, that same ENG* contract that
21 Mallinckrodt had for uranium.
22 **DR. ZIEMER:** Right.
23 **DR. MCKEEL:** So --
24 **DR. ZIEMER:** Yeah, I --
25 **DR. MCKEEL:** -- all I can say is Department of

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1 Energy missed something. Now why, how, when --
2 I don't know, but you know, February 23rd is a
3 long time --
4 **DR. ZIEMER:** I understand.
5 **DR. MCKEEL:** -- and that's why we hope -- we
6 hope that what you can do is say look, we have
7 seen a thorium contract between Dow Midland and
8 Mallinckrodt, the AEC, and that's sufficient to
9 move forward and believe -- and believe this.
10 Yes, it would be wonderful if we could get a
11 confirmation from DOE, but I don't know how to
12 do that today. I -- I don't think it's
13 practical.
14 **DR. ZIEMER:** Well, yeah, we're -- thank you,
15 that's very helpful. I -- I think we'll get
16 some additional comments here and then we can
17 figure out a path forward from this point. I
18 think Wanda and then Jim, then Jim. Okay.
19 **MS. MUNN:** A couple of clarifying questions.
20 Was the SEC petition -- do we have an SEC
21 petition that covers this extended period?
22 **MR. HINNEFELD:** No, the SEC petition was the
23 one that we -- it's an 83.14, so we said we
24 can't reconstruct the dose and we were, you
25 know, working with the belief, you know, the

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1 covered -- the covered period '57 to '60, so
2 you know, we essentially initiated -- we don't
3 have an 83.13 petition that asks for it -- you

4 know, the residual inclusion.

5 **MS. MUNN:** So are we not correct in assuming
6 that, in the absence of a petition, the only
7 avenue that's being asked of us today is to
8 extend the existing petition. That's the
9 request --

10 **DR. ZIEMER:** Well, the existing period.

11 **MR. HINNEFELD:** Yeah, the request --

12 **MS. MUNN:** I mean the existing period.

13 **MR. HINNEFELD:** The request would be that our
14 evaluation of in-- you know, inability --
15 infeasibility of doing dose reconstruction
16 should be extended into the -- into the
17 residual contamination per-- I mean that's the
18 request that's being made.

19 **MS. MUNN:** I -- I guess from a simply process
20 point of view, it would seem much more
21 straightforward if we had an SEC petition that
22 covered that residual period. It would -- it
23 would --

24 **DR. ZIEMER:** Well, this -- this can be done in
25 a two-step process, but the issue will remain,

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1 one way or the other, to -- to address because
2 there certainly can be claimants coming forward
3 from that period, so -- Dr. Melius.

4 **DR. MELIUS:** Yeah, I think just to follow up on
5 Wanda's question, I think -- we have -- there's
6 actually precedent in -- on this Board for
7 changing the period, the coverage period in
8 relationship to an evaluation report that's
9 given to us and changing -- both within NIOSH
10 and within the Board for changing that from
11 what was in the original petition. So I don't
12 think that's problematic. I -- I do think it's
13 a bit more problematic the fact that we don't
14 have any evaluation be-- of -- of feasibility
15 of doing dose -- individual dose reconstruction
16 in front of us, at least from NIOSH, for --
17 other than for the time period that they --
18 they addressed in -- in the -- based on the
19 original 83.14 petition. So whether or not
20 they -- it's possible -- feasible to do dose
21 reconstruction before or after, I'm not -- is
22 not clear to -- or should say after for either
23 uranium or thorium, it's not clear to me.

24 **DR. ZIEMER:** Yeah, LaVon, can you --

25 **MR. RUTHERFORD:** Actually that's not correct.

Footnote to self: Earlier Mr. Hinnefeld said that Lavon was on vacation, yet here he is chiming in - ???

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1 We've provided sample dose reconstructions for
2 the residual period addressing only the
3 uranium.

4 **DR. MELIUS:** Only the -- so -- so just -- it's
5 just --

6 **MR. RUTHERFORD:** Yes, but --

7 **DR. MELIUS:** -- thorium.

8 **MR. RUTHERFORD:** -- we did address the uranium,
9 which we -- as Stu had mentioned, assumed was
10 the only AEC covered.

11 **DR. MELIUS:** Okay.

12 **MR. RUTHERFORD:** But not thorium.

13 **MR. HINNEFELD:** But to your point, there has
14 not been an evaluation of the feasibility after
15 the -- in the residual period, that's true.

16 **DR. MELIUS:** Yeah, I mean I -- I would expect
17 that uranium would still -- yeah, I would
18 expect that uranium would still be feasible. I
19 think the thorium is the -- one more question.
20 I also have a pro-- procedural question --

21 **DR. ZIEMER:** Okay.

22 **DR. MELIUS:** -- is that say if we took the step
23 of moving forward and have the Board extending
24 the -- the time period of -- of coverage as has
25 been suggested, you know, what -- what then

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1 happens? I suspect that DOL then would not be
2 willing to certify people in that class beyond
3 that point. Don't they refer to the DOE
4 definition in term-- of the site and the time
5 period of coverage in terms of how they handle
6 these?

7 **MR. ELLIOTT:** Yes, that is correct --

8 **DR. MELIUS:** Yeah.

9 **MR. ELLIOTT:** -- but it may start sooner than
10 that. I don't know if our Secretary would --
11 would say that -- well, I can make this
12 designation based upon the Board's
13 recommendation, given OGC's interpretation of
14 the amendment language.

15 **DR. WADE:** That's where we -- that's where the

16 issue would first ra-- if the Board was to
17 decide to include the residual contamination
18 period because of the inability to reconstruct
19 thorium dose --

20 **DR. MELIUS:** Uh-huh.

21 **DR. WADE:** -- then the Secretary of HHS would
22 have to evaluate whether or not that was within
23 his authorities, given the -- the time period
24 that's been covered and the facility
25 designation.

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1 **DR. ZIEMER:** But in reality, as far as NIOSH is
2 concerned in that extended period, the problem
3 then would be the same on reconstructing
4 thorium. You would not be able to.

5 **MR. HINNEFELD:** Well, we -- we didn't try to --

6 **DR. ZIEMER:** All right, so (unintelligible) --

7 **MR. HINNEFELD:** -- demonstrate feasibility, so
8 we haven't really tried, so today we wouldn't -
9 - we wouldn't have that data.

10 **DR. ZIEMER:** You -- okay.

11 **MR. HINNEFELD:** Now whether it's -- you know,
12 there may be avenues that we didn't pursue
13 since we were interested in '57 to '60, but I
14 don't -- I don't know if there would be or not.

15 **DR. ZIEMER:** Yeah, you haven't actually looked
16 at the issue.

17 Dr. Lockey.

18 **DR. LOCKEY:** I wanted to -- I wanted to ask you
19 a question.

20 What I'm hearing you say is that it's your
21 thought, based on the affidavits, that after
22 1960 thorium alloy production persisted at this
23 facility. Is that correct?

24 **DR. MCKEEL:** No question about that.

25 **DR. LOCKEY:** And how long -- how long did it go

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1 on? Do you have any --

2 **DR. MCKEEL:** It goes on at least till 1998, and
3 there's some evidence from the workers -- for
4 example, they say that the PE, the
5 photoengraving work -- as you heard, some
6 workers say the thorium runs persisted even
7 after 1998, but well into the '90s, for sure.

8 And I'm talking about production work now.

9 **DR. LOCKEY:** Okay. And then that production

10 was on behalf of AEC or non-AEC?
11 **DR. MCKEEL:** Not that we -- no, the only -- the
12 only proof that we have of AEC thorium work was
13 in the covered period, the 1957 to '60.
14 **DR. ZIEMER:** Okay.
15 **DR. MCKEEL:** And -- and all the subsequent work
16 that I'm aware of was done for mili-- 95
17 percent of it was military contractors.
18 **DR. LOCKEY:** Okay. Thank you.
19 **DR. MCKEEL:** DoD-type contractors, right.
20 **DR. LOCKEY:** Thank you.
21 **DR. ZIEMER:** Okay. Robert.
22 **MR. STEPHAN:** Dr. Lockey, can I put into
23 perspective here that on this Dow search --
24 document search that we've -- all went round
25 and round on for months now, NIOSH asked Dow

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1 for documents under a certain set of criter--
2 for their criteria. The Senator's office asked
3 Dow for documents under a -- a different set of
4 criteria. Dow sent to us last Friday night at
5 midnight 400 documents from Dow Madison, no
6 documents from Rocky Flats, despite -- now not
7 on Dow, but despite that they had -- their
8 general counsel had told us they had thousands
9 of boxes related to Rocky Flats. The question
10 here is about thorium from Dow Madison to Rocky
11 Flats. Dow Madison did a document search.
12 They only sent us documents from Dow Madison,
13 despite telling us they had documents from
14 Rocky Flats. So it's important to keep that in
15 mind, I think.
16 **DR. ZIEMER:** Okay. Thank you. Additional
17 comments or questions?
18 **DR. WADE:** Could I just sort of summarize three
19 issues? The first issue is you have a report
20 from NIOSH in front of you that says grant the
21 SEC during the covered period, based upon the
22 inability to reconstruct thorium dose. Even
23 though thorium was part of a commercial
24 operation, that dose can be considered during
25 the covered period.

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1 What's not stated in the recommendation that
2 the Board can comment on is NIOSH claims it can
3 reconstruct the uranium dose during the -- the

4 residual period. That's an issue that's
5 legitimate for the Board to consider and
6 evaluate.
7 And then the 700-pound gorilla is whether or
8 not thorium work was AEC work. Now that's an
9 issue that the Board can approach in a variety
10 of ways, none of them directly, in my opinion.
11 So I think those are the three things that you
12 have.
13 **DR. ZIEMER:** Other comments? Wanda Munn.
14 **MS. MUNN:** One question. Is -- is it possible
15 for us to get to the FUSRAP report personally?
16 Is that on line anywhere?
17 **DR. ZIEMER:** Certainly those are public
18 reports. I'm not sure how helpful it will be -
19 -
20 **MR. HINNEFELD:** You're talking about the FUSRAP
21 survey report?
22 **MS. MUNN:** Yeah, I just wanted to have an
23 opportunity to see for myself the --
24 **MR. HINNEFELD:** It's --
25 **MS. MUNN:** -- referencing itself time and time

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1 again.
2 **MR. HINNEFELD:** It's on the O drive.
3 **MS. MUNN:** It's -- okay.
4 **MR. HINNEFELD:** It's in the document review --
5 and there's a Dow folder --
6 **MS. MUNN:** Okay, if it's on --
7 **MR. HINNEFELD:** -- and it would be SE-- it's in
8 the references for the evaluation report.
9 **MS. MUNN:** Fine, thanks.
10 **DR. ZIEMER:** Another comment?
11 **DR. WADE:** Yes, I'll say it on the record
12 rather than trying to whisper it. At the last
13 meeting the Board did ask SC&A to become
14 familiar with the Dow SEC petition in
15 anticipation of some downstream work. So I
16 mean it's possible John Mauro might have a
17 comment to make.
18 **DR. ZIEMER:** Well, I -- John, this may be too
19 early, but go -- if you have comments at this
20 time or any input on -- from SC&A.
21 **DR. MAURO:** Yes, I could give you a summary of
22 what we -- we were given the direction by the
23 Board to perform a focused review and -- and we
24 did. We reviewed all the documents that were

25 in the folder, of course the evaluation report,

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1 the petition. The team consisted of myself, a
2 metallurgist with expertise in just this very
3 subject, and a radiochemist with expertise in
4 air sampling of thorium. And in fact we put
5 together a working draft, I'm holding it in my
6 hand, and -- to look at the issues as we've
7 been discussing. None of -- none of these
8 legal issues, but just simply the radiation
9 protection, health physics, dose reconstruction
10 issues. And we have come to certain
11 observations in -- that we -- I'd be glad to
12 offer. And of course, if so requested, we
13 could deliver to you our written report. But
14 this maybe constitutes a status report of what
15 we found out to date.
16 We have not looked at the 700 pages that showed
17 up on Saturday, so that's -- so -- we looked at
18 everything else before that.
19 Bottom line. Uranium, the dose reconstruction
20 during the covered period, '57 through '60,
21 there is -- we agree with NIOSH that exposures
22 to workers who were exposed to the uranium
23 during the covered period while it was being
24 rolled, extruded, is something that there is
25 adequate information to perform dose

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1 reconstruction.
2 The residual uranium post, we believe that
3 there is adequate information to reconstruct
4 doses to the uranium.
5 Now to move on to thorium, which we also looked
6 at, is there sufficient information to
7 reconstruct thorium exposures during the
8 covered period. From what -- from the data
9 that we reviewed, and we looked very carefully
10 at this, we -- we believe we have a pretty good
11 understanding of the alloying process that took
12 place. It was -- the best way to describe it
13 is it was a dangerous operation because you're
14 working with molten magnesium, and there were
15 explosions and fires that occurred, and air
16 samples were taken at the time -- there were
17 air samples, and we reviewed that data. Bottom
18 line is that there was -- un-- under most

19 occasions, they did not detect the presence of
20 any thorium. Apparently there were some short21
lived radionuclides that became airborne and
22 that were airborne, but it does not appear that
23 the thorium was becoming readily airborne at
24 high concentrations at -- because they bo--
25 were below the limits of detection.

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1 So we asked our radiochemist to do the best he
2 can to figure out what the lower limits of
3 detection were at the time, and that was -- and
4 we did the best we can to come to grips with
5 that. And the bottom line is that, depending
6 on what assumptions you make on the type of
7 sample that was collected, the duration of the
8 sample, the volume of air, the counting time,
9 what the lower limit of detection is, so we
10 have a range of numbers but they were all low.
11 That is, we're talking about concentrations on
12 the order of one DAC following -- following
13 these events.

14 So -- now, that would be thorium that might
15 emer-- come off from a -- an event, an
16 incident. There's also a question regarding
17 other types of activities that took place. Now
18 here's where we don't have an answer for you.
19 That is, beside those thorium measurements that
20 were taken because of concern that there may
21 have been some thorium becoming airborne during
22 the alloying process and any transients that
23 occurred during the alloying process,
24 apparently there were lots of other activities
25 going on that you may want to refer to as

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1 machining thorium or -- or handling in various
2 ways. We do have data regarding various --
3 various thorium machining operations and in
4 fact we discussed this in the past regarding
5 Rocky Flats. So there is a lot of data related
6 to what the levels of airborne dust loadings
7 are associated with various machining
8 operations.
9 Now for tho-- now where we don't have
10 information is there may have been certain
11 unique activities associated with the
12 management of the thorium metal, which was

13 certainly there, that was different than the
14 experience that -- that we have in our records
15 -- for example, regarding the machining of --
16 or uranium and thorium that might be different.
17 So we're at a place right now that's -- that
18 says that from the information we have before
19 us, the actual measured values, our
20 understanding of the process, it -- it appears
21 that the levels of thorium were not very high.
22 They were below the limits of detection in
23 general. And based on the literature for other
24 operations that were reviewed from various
25 publications where thorium was machined, for

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1 example, it appears that there's a way to place
2 a plausible upper bound.
3 What we don't know is that -- and we don't have
4 an answer to is that there may have been
5 certain types of activities related to the
6 management, handling, machining of thorium,
7 perhaps centering it, that we don't have
8 information. So here's where I guess, to a
9 degree, we're saying there's an unknown here
10 that we did not research in depth, but -- so
11 whether or not -- so -- so in a funny sort of
12 way, we -- right now we can't say whether or
13 not you could place a plausible upper bound on
14 the thorium exposures. We -- we did not do
15 enough research into it. But from the -- the
16 literature that we did look at, it is not
17 immediately apparent that there was a serious
18 thorium problem, airborne, at the facility
19 during the covered period.
20 **DR. ZIEMER:** Okay. Thank you, John. NIOSH has
21 indicated, however, an inability to reconstruct
22 dose from thorium, perhaps because of some of
23 those unknowns that you've identified, so that
24 -- I'm trying to determine whether your bottom
25 line is different -- it sounded like you were

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1 saying in general there may not have been
2 serious thorium problems but you can't really
3 pin that down and bound it completely --
4 **DR. MAURO:** At this time, that's correct,
5 especially since we haven't looked at the 700
6 pages that came in on Saturday.

7 **DR. ZIEMER:** Yeah. Okay, thank you. Dr.
8 McKeel?

9 **DR. MCKEEL:** I just have one directly relevant
10 thing. One of the issues about extrusion press
11 operation is in some of the other sites that
12 I've read about apparently it was -- it's
13 fairly standard practice for radioactive
14 extrusions -- radioactive metal extrusions to
15 put a vacuum hood around the extrusion press
16 where the metal extrusions come out and to
17 collect it that way so it's completely
18 important to know whether extrusion presses
19 were or were not hooded, and the ones at Dow
20 Madison were not hooded. And I think that John
21 -- I mean I think that's something that must be
22 clarified, because if you have the vacuum hood
23 on there the dust concentrations are going to
24 be way low compared to the others.

25 **DR. ZIEMER:** Thank you. Yeah -- yes, Robert.

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1 **MR. STEPHAN:** John, just as a follow-up -- Dr.
2 Makhijani, I think you had a conversation with
3 Bill Hoppe, one of the Dow workers, but have
4 you been able to speak with any of the other
5 workers of the -- at least of the 11 who
6 testified about the shipments to Rocky Flats?
7 Have you spoken to them about thorium?

8 **DR. MAKHIJANI:** (Off microphone) I have
9 (unintelligible).

10 **DR. ZIEMER:** Oh, yeah, okay.

11 **DR. MAKHIJANI:** Just to clarify, I -- I did not
12 talk to Bill Hoppe about the conditions of the
13 plant. I just talked to him about shipments to
14 Rocky Flats and what he told me is part of our
15 Rocky Flats report, although the interview was
16 not published because of Privacy Act
17 considerations.

18 **DR. ZIEMER:** Perhaps Bill Hoppe is still on the
19 line. Are you, Bill?

20 **MR. HOPPE:** Yes.

21 **DR. ZIEMER:** Do you have any additional
22 comments on this?

23 **MR. HOPPE:** Our (unintelligible) in shipping
24 from '92 to -- I mean '62 to '75 is almost all
25 thorium, Hk and Hm, went to like Rocky Flats,

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1 Martin Marietta or Lockheed -- there's others,
2 I can't think right now.

3 **DR. ZIEMER:** Okay.

4 **MR. HOPPE:** But every time we put a label on it
5 -- a shipping label, it had Department of Labor
6 in care of, you know, like Rocky Flats, and we
7 shipped a lot of metal to Rocky Flats
8 (unintelligible) --

9 **DR. ZIEMER:** Department of Labor, or do you --
10 did you mean Department of Energy?

11 **MR. HOPPE:** -- (unintelligible) -- Huh?

12 **DR. ZIEMER:** Did you mean the Department of
13 Energy or Department of Labor?

14 **MR. HOPPE:** Department of Energy.

15 **DR. ZIEMER:** Energy, okay, yeah, thank you.

16 **MR. HOPPE:** It started out as DoD --

17 **MS. MUNN:** It would have been AEC.

18 **MR. HOPPE:** -- and then they went to DOE.

19 **DR. ZIEMER:** Right, okay. Thank you.

20 **MR. HOPPE:** Down there. And then --

21 **MS. MUNN:** But it would have been AEC or --

22 **MR. HOPPE:** -- Rocky Flats or Martin Marietta.
23 Some of it would be (unintelligible) sheets and
24 others would be real heavy (unintelligible),
25 eight and ten inches, you know.

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1 **DR. ZIEMER:** Yeah. Okay. Thank you, Bill.

2 Board members -- okay, com--

3 **UNIDENTIFIED:** I'd like to make a comment
4 myself.

5 **DR. ZIEMER:** Who is this?

6 **MR. WIEDER:** This is Art Wieder. I'd like to
7 make a comment.

8 **DR. ZIEMER:** Yes, Art. Please go ahead.

9 **MR. WIEDER:** I -- I was a laborer, a painter
10 and a brick layer at Dow Madison plant, and I
11 was at the press when they was pushing the
12 thorium, and some of the thorium, like when it
13 was extruded, would come out and -- terrible
14 (unintelligible), and they couldn't use that so
15 they stored that in 2 building and that thorium
16 stayed over there -- 2 building, which our
17 paint shop was in 2 building, and it stayed
18 over there for years and years and years and we
19 worked around it, swept around it and
20 everything else and it -- I don't know -- I

21 heard just recently that they got it out of
22 there.

23 **DR. WADE:** Thank you.

24 **DR. ZIEMER:** Okay. Thank you.

25 **MR. WIEDER:** And that's my comment.

Footnote: Mr. Wieder is the second litmus case and is the
Petitioner of record on 83.14 Dow SEC-00079 that was enacted
into law for the covered period 1957-60.

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1 **DR. ZIEMER:** Thank you. Wanda Munn?

2 **MS. MUNN:** Can we assume that the petitioners
3 have no problem with our parsing this question,
4 because it clearly needs more definition than
5 we have now, and moving forward with the
6 petition that is before us now, with the
7 understanding that we will further pursue an
8 additional or extension of this SEC to cover
9 additional dates for residual contamination.

10 **DR. MCKEEL:** Well, I would like to say that the
11 petitioners have very strong problems with
12 that, and the reason why, Wanda, is that in
13 February when we had the Dow SEC update, we
14 clearly focused our concern on covering the
15 residual period based on the 11 affidavits
16 which I put on the record then and gave you a
17 Powerpoint and gave you ex-- excerpts from the
18 -- those sworn affidavits that said exactly
19 what you heard from Bill Hoppe right now, that
20 truckloads of thorium went to Rocky Flats. And
21 so we've always contended from the outset that
22 that was a major issue. Robert just read into
23 the record again Larry Elliott's statements
24 that he was well aware that a special aspect of
25 this SEC was coverage of the residual period

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1 -- we thought all along that those worker
3 affidavits document that Dow Madison was
4 supplying thorium to the Atomic Energy
5 Commission at Rocky Flats. So now all we're
6 doing today is giving you independent,
7 additional conclusive evidence that some of the
8 thorium work was AEC-related under a contract
9 to the AEC, which we produced for you from
10 Mallinckrodt. So I don't think this is a new
11 issue that we're raising --

12 **DR. ZIEMER:** No, I don't think --
13 **MS. MUNN:** No, I don't --
14 **DR. ZIEMER:** I think that's -- that's correct.
15 We're trying to find a way forward that will
16 try to address both of these, and -- and one
17 possibility would be to take action on the
18 immediate petition, and then take an additional
19 action, perhaps to ask the Secretary to take
20 what steps are needed within his purview to
21 help move this definition forward in some way.
22 What -- I think what we're trying to avoid is
23 sabotaging the whole thing by providing a
24 recommendation that can't be well implemented,
25 so -- Robert, you have some additional comments

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1 on that?
2 **MR. STEPHAN:** Dr. Ziemer, can -- can we
3 condense down and maybe, you know, put in a --
4 I'm not a lawyer and I'm not a scientist. You
5 know, I've heard the questions, but I haven't
6 heard the answer as to why we -- we could not
7 act on this residual period today. I mean I
8 respect what you're charged with in terms of
9 advising the Secretary and what you're -- what
10 you're trying to accomplish and -- and
11 certainly if we he-- if we hear an answer that
12 precludes you --
13 **DR. ZIEMER:** Well, our con --
14 **MR. STEPHAN:** -- from doing it, but --
15 **DR. ZIEMER:** -- our concern --
16 **MR. STEPHAN:** -- we haven't heard it.
17 **DR. ZIEMER:** Our concern is implementing -- if
18 the Board were to recommend that, the
19 implementation goes back to Department of
20 Labor, and -- and the change has to occur there
21 in order for it to work. My -- the concern I
22 just expressed was I don't want to sabotage the
23 whole thing by having something that won't work
24 that perhaps we can parse it in a way that says
25 let's deal with the immediate petition and then

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1 ask the Secretary -- and we can -- we can go on
2 record as indicating the -- the Board's
3 understanding of -- of -- or we could go on
4 record as recommending that this period be
5 extended and ask that the steps be taken so

6 that it opens the way for the -- for it to
7 happen. So I think that's what Wanda was
8 getting at, to parse it out in a -- and we can
9 do both steps here today, I think.

10 **MS. MUNN:** Exactly, and the second part of that
11 would be also to further accommodate the
12 process by -- by clarifying the definition from
13 which the original concern -- as to what this
14 facility was, and -- and identifying whether
15 the word "products" in there adequately covers
16 what we need.

17 **DR. ZIEMER:** Yeah, I think -- I think Dr.
18 McKeel's made a compelling case to the Board
19 for why it should be. Our -- our focus now is
20 how can we accomplish this in a way that meets
21 legal requirements and does not impede the
22 whole thing.

23 **MR. STEPHAN:** Dr. Ziemer, just to clarify for
24 Mr. Hoppe and Mr. Wieder, so on -- on your
25 point, which I -- Deb and Dr. McKeel and I have

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1 just been discussing, we -- we think we
2 understand it correctly. We agree, but I want
3 to be careful not to speak for them in case I'm
4 wrong. But Mr. Hoppe and Mr. Wieder, what --
5 what we're talking about here is if we lump in
6 the residual period, because Mr. Hoppe is not
7 covered under the current -- if we lump in the
8 residual period with the current wording and
9 the Secretary decides that doesn't work, then
10 we lose --

11 **DR. ZIEMER:** We lose time, right.

12 **MR. STEPHAN:** -- the 47 -- we lose the 47
13 workers who are going to be covered under the
14 83.14 and we have to start that process all
15 over again. So we would be comfortable with --
16 I think what you're moving toward is the 83.14
17 --

18 **DR. ZIEMER:** Well, we're trying to find an
19 expeditious way to --

20 **MR. STEPHAN:** -- 83.14 today and I guess what
21 you're saying -- an advisory opinion separately
22 on the residual, we would be comfortable with
23 that.

24 **DR. ZIEMER:** -- to see -- to find a way to --
25 to get that definition changed so that Labor

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1 and -- and DOE actually will implement what we
2 want done.

3 **MR. STEPHAN:** Right, we -- we agree.

4 **DR. ZIEMER:** I'm -- I'm -- I say what we want
5 done. We haven't taken any action yet so I
6 don't want to -- and Liz, if you can add
7 something from counsel here.

8 **MS. HOMOKI-TITUS:** I'm not sure I can add
9 something, I just want to clarify that it's not
10 100 percent correct that just because -- if
11 they were to agree to clump the whole thing
12 together, the Secretary doesn't necessarily
13 have to accept the recommendation of the Board.
14 The Secretary could still parse it and say I'm
15 adding this portion and not this portion, so
16 it's not necessarily going to completely
17 eliminate the 83.14 portion just because --

18 **DR. ZIEMER:** Yeah, it may -- it may set that
19 aside anyway if he doesn't feel that that's in
20 the --

21 **DR. WADE:** I think Jim has --

22 **DR. ZIEMER:** Yes, Robert.

23 **MR. STEPHAN:** Well, in light of that, then --
24 then our position would change and our position
25 would be let's lump it together, let's put this

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1 in Labor's court -- who didn't bother to show
2 up today -- and let -- let's see what we could
3 do. If we're not going to lose the 83.14 and
4 the Secretary can parse that out, then -- then
5 we would encourage the Board to lump it
6 together and see where we go.

7 **DR. ZIEMER:** I'm not sure if -- Liz, is that
8 what you were saying?

9 **DR. WADE:** I don't think we know that, and I
10 don't think we want to make that judgment.

11 **MS. HOMOKI-TITUS:** I can't say what the
12 Secretary would do. I'm just telling you
13 legally what his options would be.

14 **DR. WADE:** Right.

15 **MS. HOMOKI-TITUS:** My recommendation would be
16 that you give him the most direct guidance of
17 what you want done.

18 **DR. WADE:** Correct.

19 **DR. ZIEMER:** Thank you.

20 **DR. WADE:** Jim has --

21 **DR. ZIEMER:** Jim.
22 **DR. MELIUS:** Can I just add -- I think there's
23 another important reason to split this up, and
24 that is the fact that we don't have before us
25 information indicating that for the residual

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1 period that this group qualifies technically as
2 an SEC. There's no -- NIOSH --
3 **DR. ZIEMER:** We don't have an evaluation report
4 --
5 **DR. MELIUS:** -- NIOSH has not examined it, nor
6 has SC&A, as to whether or not it's feasible to
7 do dose reconstruction for that -- that time
8 period. They've already made a ruling on the
9 uranium finding, but they have not -- neither
10 one of them has looked at the thorium issue.
11 **DR. MCKEEL:** I -- I would just like to -- I --
12 I -- I -- Jim, I -- with Dr. Melius, I
13 certainly agree with what he says, but I would
14 further add in the strongest possible way that
15 we begged, we implored, we brought this issue
16 up to NIOSH, and in fact I was quite shocked
17 and dismayed when I saw the evaluation report
18 on April the 13th and realized that after all
19 our discussions there was not a more in-depth
20 focused attempt to work out whether dose
21 reconstruction was feasible during the residual
22 period. I thought Larry and I honestly had a
23 bargain about that and that would be
24 forthcoming. And so when I wrote back my
25 concerns about that evaluation report, that was

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1 well represented in the list of concerns, why
2 didn't you address this in a more comprehensive
3 way. So given the fact that what we have
4 today, I absolutely agree that residual period
5 feasibility needs to be assessed, but I wish it
6 had been done --
7 **DR. ZIEMER:** Yeah, we understand.
8 **DR. MCKEEL:** -- in a more timely way.
9 **DR. ZIEMER:** Yeah. Thank you.
10 **DR. MELIUS:** And can I just add -- I mean I
11 completely agree with you on that, and I was
12 concerned also and I think to some extent the
13 Board should have tried to follow up more
14 vigorously to -- to try to address that, but we

15 weren't -- we weren't aware of all that was
16 going on, but -- but despite that, we're still
17 stuck with -- that delay, we're still stuck
18 without the necessary information and to put
19 forward a recommendation that's -- doesn't have
20 adequate justification would just be another,
21 you know, potential avenue to delay this or for
22 the Secretary to send that -- that back and --
23 **DR. ZIEMER:** Yes, 'cause the Secretary wouldn't
24 have the full set of tools he requires then.
25 **DR. MELIUS:** And -- and I would add, I think,

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1 as part of our way of moving forward, that we
2 need to ask NI-- you know, NIOSH to -- in a
3 very timely fashion to address that deficit and
4 -- deficiency and provide us with information.
5 I think we should also ask SC&A to -- in
6 parallel to -- to also get involved in -- and
7 look at that residual period also and the
8 question of dose reconstruction, and I would
9 much prefer that we not have another informal
10 presentation from SC&A, which I found to be
11 extremely confusing and disturbing, but that we
12 -- we actually have a formal report and a
13 formal presentation at our next meeting about
14 this.

15 **DR. ZIEMER:** Thank you. Okay. In -- in order
16 to move things forward, I think it would be
17 appropriate if the Chair now called on -- if
18 anyone wished to make a motion on the report
19 that we have before us, which is the evaluation
20 report on the petition.

21 Okay, we've got Wanda and Jim both vying for --
22 **MS. MUNN:** Well, go ahead, Jim.

23 **DR. MELIUS:** Well, my only question -- it's
24 sort of the prerogative of the Board, I have
25 actually prepared a letter which I can read.

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1 It's not been copied yet 'cause I've been
2 working on it --

3 **DR. ZIEMER:** Please read your letter.

4 **DR. MELIUS:** -- during the presentation, so
5 bear with me. If the computer works, we'll --
6 that deals with this first section and might
7 facilitate us moving forward.

8 **DR. ZIEMER:** This is a motion that is actually

9 in the form of our usual motions then.

10 **DR. MELIUS:** Yes, yes.

11 **DR. ZIEMER:** Thank you.

12 **DR. MELIUS:** And I will start reading. The
13 Board recommends that the following letter be
14 transmitted to the Secretary of Health and
15 Human Services within 21 days so that should
16 the Chair become of any issue which, in his
17 judgment, would preclude the transmittal of
18 this letter within that time period, the Board
19 requests that he promptly informs the Board of
20 the delay and the reasons for this delay, that
21 he immediately works with NIOSH to schedule
22 emergency meeting of the Board to discuss this
23 issue.

24 The letter. The Advisory Board on Radiation
25 and Worker Health, parentheses, the Board, has

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1 evaluated SEC petition 0079 concerning workers
2 at the Madison, Illinois -- let me -- at the
3 Dow Chemical Company Madison, Illinois facility
4 under the statutory requirements established by
5 EEOICPA and incorporated into 42 CFR Section
6 83.13 and 42 CFR Section 83.14. The Board
7 respectfully recommends a Special Exposure
8 Cohort, parentheses, SEC, close parentheses, be
9 accorded to all AWE employees who were
10 monitored, or should have been monitored, for
11 exposure to thorium radionuclides while working
12 at the Dow Chemical Company Madison site for a
13 number of work days aggregating at least 250
14 work days during the period from January 1st,
15 1957 through December 31st, 1960, or in
16 combination with work days within the
17 parameters established for one or more other
18 classes of employees in the SEC. The Board
19 notes that although NIOSH found that they were
20 unable to completely reconstruction radiation
21 doses for these employees, they believe that
22 they are able to reconstruct components of the
23 internal dose, including uranium; external
24 exposures from radi-- all radionuclides except
25 thorium, and occupational medical doses for

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1 this class of workers and therefore individuals
2 with non-presumptive cancers may be considered

3 for partial dose reconstructions. This
4 recommendation is based on the following
5 factors:
6 Number one, people working at the Dow Chemical
7 Company Madison site were involved in various
8 industrial operations involving uranium and
9 thorium. The NIOSH review of the available
10 monitoring data found that there was -- there
11 were not sufficient data available to estimate
12 the internal and external doses from exposure
13 to thorium. Therefore, NIOSH concluded that
14 individual dose reconstructions are not
15 feasible for working -- for people working in
16 this facility during the time period in
17 question. The Board concurs with this
18 conclusion.
19 Number three, NIOSH determined that health may
20 have been endangered for workers at the Dow
21 Chemical Company Madison site during the time
22 period in question. The Board concurs with
23 this determination.
24 Enclosed is supporting documentation from the
25 recent Advisory Board meeting held in Denver,

Footnote: Melius motion 1 for the covered period 1957-60

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1 Colorado where this Special Exposure Cohort was
2 discussed. If any of these items are
3 unavailable at this time, they will follow
4 shortly.

5 **DR. ZIEMER:** Okay. Is there a second to the
6 motion?

7 **MS. MUNN:** (Indicating)

8 **MR. CLAWSON:** Second.

9 **DR. ZIEMER:** Okay, we've got several seconds.

10 Is there any discussion?

11 Yes, Mark.

12 **MR. GRIFFON:** I just want -- I don't know if
13 Stu is still around, but I -- I think we need
14 to maybe for the record understand a little
15 more of -- of why -- and I know NIOSH concluded
16 they couldn't reconstruct thorium dose. I just
17 want to know specifically there's -- is it
18 extent of operations -- I -- I want some
19 reasoning -- rationale for why it's -- can't be
20 bounded.

21 **MR. ELLIOTT:** Well, he -- Stu did step out, but

22 I'll try to do some justice to this question,
23 and if he steps back in he can -- seek more
24 from him. I believe Stu would say to you that
25 -- that we feel that the thorium process

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1 operations were so diverse, they included a lot
2 of different types of processing work and
3 handling the -- the thorium-based materials and
4 the alloys that were -- were created. There
5 were -- there were chemistry proc-- related
6 processes involved. It went beyond just --
7 just extruding metal or manipulating the metal
8 itself, physically manipulating the metal. The
9 data that we do have for thorium does not give
10 us enough information about the -- the
11 distribution of exposures from these various
12 diverse activities. We can't be sure what type
13 of internal dose could have been acquired in
14 interacting with the diverse operations. There
15 may be enough that we can look at external
16 dose, but we haven't really, you know, sorted
17 all of that out yet, so add on internal dose to
18 thorium as an issue. But he can elaborate more
19 if you want more.

20 **DR. ZIEMER:** Maybe Jim can also step on that
21 then.

22 **DR. NETON:** Yeah, I think there's a couple of
23 other areas more specifically that -- that we
24 were looking at. One of those is the -- and
25 John I think did a pretty good job describing

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1 how the chemistry of making mag--
2 thorium/magnesium alloy occurs, and we think
3 those operations are fairly well covered, to a
4 large extent, although Stu did mention the
5 ventilations in the plant and stuff could vary.
6 But there were also some indications that there
7 were operations where the material congealed in
8 the bottom of these vats and they were chipping
9 away at these materials to remove them out of
10 the vats, so this is a lot of thorium activity
11 there, as well as some indication there may
12 have been a -- fires that occurred when they
13 were dumping in the thorium into the vats
14 themselves. And in addition there's a thorium
15 source term -- thoron source term associated

16 with this of an indeterminate amount because of
17 the degree of in-growth of -- of the -- of the
18 daughter products from the thorium material
19 that they received. And I think -- to my
20 knowledge, there's only one thoron air sample
21 available for this plant, so that -- that
22 exposure pathway is -- is not able to be
23 reconstructed with sufficient accuracy, as
24 well.
25 **DR. ZIEMER:** Okay.

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1 **MR. GRIFFON:** Thank you, Jim. That's what I --
2 **DR. MCKEEL:** Can I --
3 **DR. ZIEMER:** Yes.
4 **DR. MCKEEL:** I just want one brief comment --
5 **DR. ZIEMER:** You bet.
6 **DR. MCKEEL:** -- on the record. This -- this is
7 very important. Ev-- everybody at NIOSH is now
8 talking -- and we're bantering back and forth
9 all the monitoring data that they have, and I
10 just wanted to put on the record that I have
11 not been given a single datapoint from that
12 plant at all, and we've asked for it
13 repeatedly. And the -- the -- the two
14 documents we're talking about, the Silverstein
15 '57 and the AEC '60, I've asked for those
16 documents, too, and I think there's a fairness
17 principle that the petitioner is supposed to be
18 afforded the documents that NIOSH has, and I
19 haven't gotten -- I have not seen that at all.
20 **DR. ZIEMER:** Okay.
21 **DR. MCKEEL:** So I can't even react to this --
22 **DR. ZIEMER:** Okay.
23 **DR. MCKEEL:** -- in any way.
24 **DR. ZIEMER:** Let's make sure -- certainly the
25 petitioner's entitled to that information. I'm

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1 not sure why we -- will someone follow up on
2 that?
3 **DR. MCKEEL:** I -- I can -- I can tell you that
4 I asked for all of that data on April the 16th
5 in a letter to Larry Elliott, and it just
6 hadn't been produced so I'd -- I'd appreciate
7 getting that.
8 **DR. WADE:** We'll follow up.
9 **DR. ZIEMER:** We'll follow up. Yeah, thank you.

10 I'm just noticing something in our wording --
11 in our boilerplate wording which we have been
12 using where we say we are recommending a
13 Special Exposure Cohort for these individuals.
14 Now actually, technically, there is one Special
15 Exposure Cohort, and all of these groups become
16 mem-- classes of the cohort. This is not a new
17 SEC. I think our wording, Jim -- and this
18 would be a friendly amendment -- would be to --
19 we might say recommend Special Exposure Cohort
20 status or something like that, but we are not
21 recommending a new Special Exposure Cohort.
22 There is only one Special Exposure Cohort and
23 all the groups become mem-- classes in the
24 cohort. So would -- without objection, can we
25 modify that a little bit so that it --

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1 **DR. MELIUS:** Yeah, that's fine.
2 **DR. ZIEMER:** -- it's technically correct.
3 We've been using this language right along and
4 I suddenly realized it probably -- it -- the
5 Secretary is able to understand what we really
6 mean and give the right language to Congress,
7 but perhaps we can modify that.
8 Any discussion on this motion?
9 (No responses)
10 Are you ready to vote?
11 (No responses)
12 Okay. All in favor of the motion, raise your
13 right hand.
14 (Affirmative responses)
15 And there appear to be no noes and no
16 abstentions. The motion carries.
17 **DR. WADE:** The motion -- yeah, the motion
18 carries unanimously.
19 **DR. ZIEMER:** Thank you very much. It would be
20 appropriate to have a follow-up motion dealing
21 with the issue of the extension of time. Jim,
22 are you prepared to make a motion or -- because
23 what I was going to say, we may need some
24 wordsmithing and if so we can move ahead and
25 then return to this, but...

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1 **DR. MELIUS:** Depends on -- whatever people --
2 let me wri-- let's come back to it. That may
3 be better.

4 **DR. ZIEMER:** What I'm going to suggest is that
5 -- in -- in fact, let me ask if -- I'll do this
6 in a general way. Does the Board wish to have
7 a motion where we can deal with the issue of
8 extending the covered period? Is there general
9 agreement that we would like to have such a
10 motion; and if so, it would include some
11 tasking issues related to that.

12 Wanda, a comment?

13 **MS. MUNN:** Very much in favor of having such a
14 motion.

15 **DR. ZIEMER:** Yeah, I -- it seems to be --

16 **MS. MUNN:** The wording of it seems to be
17 critical and probably will take more than five
18 minutes to do. Perhaps we could take a 20-
19 minute break and give Dr. Melius some --

20 **DR. ZIEMER:** Yeah, well, I was hoping we would
21 plow ahead without breaks and people would take
22 them as needed, but we may need to -- we may
23 need to do that. Maybe a ten-minute comfort
24 break, but we need a couple of people to
25 develop some wording. Let me -- who's going to

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1 volunteer --

2 **DR. MELIUS:** I'll develop some.

3 **DR. ZIEMER:** Jim -- and Wanda can -- will help
4 you, if needed. She's a word expert. But
5 let's make sure we cover requesting the
6 Secretary to do some things on behalf of -- or
7 -- think about the Secretary's involvement, if
8 we wish to make it a recommendation to the
9 Secretary, and then whatever tasking we need
10 for our contractors and whatever we request --

11 **DR. WADE:** And NIOSH.

12 **DR. ZIEMER:** -- NIOSH to do so that we can be
13 prepared to take action. And so we'd have two
14 things going on. One would be the change of
15 the -- the definition of the covered period,
16 and the other would be the evaluation of
17 whether dose can be reconstructed during that
18 period.

19 **DR. WADE:** Right. I need to say for the record
20 that if the Board tasks NIOSH and SC&A to
21 evaluate the question of whether thorium dose
22 can be reconstructed during the residual
23 period, that you're asking them to -- to
24 evaluate a hypothetical at this point because

25 at this point thorium dose during the residual

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1 period is not on the table. If our other
2 actions are successful, then that issue could
3 be on the table. And I don't want to create a
4 situation where NIOSH could come back and say
5 we cannot reconstruct thorium dose, and then
6 the assumption be made that that immediately
7 would qualify for an SEC. We have to deal with
8 the issue of whether thorium dose is legitimate
9 to consider during the residual contamination
10 period.

11 **DR. MELIUS:** Yes, but --

12 **DR. ZIEMER:** Okay.

13 **DR. MELIUS:** Can I just clarify? I mean I also
14 think we need a -- need to make sure this is
15 done in an expeditious manner, and -- and I
16 think that's the -- I think it's understood
17 that there are -- it's hypothetical, to some
18 extent, but at the same time I don't think we
19 want to have a sequential series of meetings to
20 address this.

21 **DR. WADE:** I agree completely.

22 **DR. ZIEMER:** Okay. So let's go ahead and take
23 as brief a break as we can, ten-minute break --
24 comfort break, and we'll go from there. Thank
25 you.

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1 **DR. WADE:** Come back to Chapman Valve.

2 **DR. ZIEMER:** And then we'll come back to
3 Chapman Valve, as well.

4 (Whereupon, a recess was taken from 10:43 a.m.
5 to 11:00 a.m.)

CHAPMAN VALVE SEC PETITION

DR. GEN ROESSLER, WORK GROUP CHAIR

PETITIONER (pages 125 through 157)

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1 **ROCKY FLATS MOTION (Pages 157-___)**

2 I'd like to have Board members pull out the
3 written copy of the Rocky Flats draft, the
4 official motion.

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1 (No responses)

2 Abstentions?

3 (No responses)

4 Motion carries. Thank you.

BOARD WORK ON DR. MELIUS' 2ND DOW SEC MOTION CONTINUES...
Pages 194 through 199

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5 **DR. WADE:** Hurry back, Phillip. Now we do have
6 issues on Dow.

7 **DR. MELIUS:** Yeah.

8 **DR. ZIEMER:** Do we have anything in writing on
9 Dow at this --

10 **DR. MELIUS:** No.

11 **DR. ZIEMER:** No, okay. Go ahead.

12 **DR. MELIUS:** We -- we've already -- we approved
13 verbally a letter --

14 **DR. ZIEMER:** Right.

15 **DR. MELIUS:** -- that -- that I read. I have
16 something that -- on my screen that Wanda has
17 worked with me to edit --

18 **DR. ZIEMER:** Okay.

19 **DR. MELIUS:** -- and approve.

20 **DR. ZIEMER:** Go ahead, if you would; read it to
21 us.

22 **DR. MELIUS:** Okay, okay. Dow Madison
23 recommendations. The Board authorizes our
24 Chair to write a letter to the Secretary of
25 Health and Human Services asking him to work

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1 with the Secretaries of Energy and Labor --
2 address the issue of EEOICPA coverage for
3 workers at the Dow Chemical Company Madison
4 site during the period from 1961 through 1998.
5 The Board has recently received information
6 indicating people working at this facility may
7 be eligible beyond the current covered period.
8 This new information on -- this new information
9 included information on continued exposures to
10 thorium in this time period. Extension of the
11 covered period is necessary for the Board to be
12 able to consider Special Exposure status for
13 this group of workers.

14 The Board also requests that NIOSH extend its
15 evaluation of the Dow Madison site to evaluate
16 the ability -- its -- the ability to conduct
17 individual dose reconstructions for the time
18 period from 1961 to 1998. Board also requests
19 that SC&A evaluate the ability to conduct
20 individual dose reconstructions for this time

21 period. The Board requests that both NIOSH and
22 SCA provide these updates at our next meeting.
23 **DR. ZIEMER:** Okay. Let me get this on the
24 floor first. Is there a second?
25 **MS. MUNN:** Second.

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1 **DR. ZIEMER:** Seconded. Now it's on the floor.
2 Yes?
3 **MR. STEPHAN:** Thank you, Dr. Ziemer. We would
4 just ask that we -- we clarify that the task to
5 SC&A includes speaking to the -- at least the
6 11 Dow workers -- I mean this is the crux of
7 the argument -- who have testified to the
8 thorium shipments. Ju-- ju-- just a document
9 review without speaking to the workers, you
10 know, we feel is relatively useless, so we just
11 want to make sure that SC&A is clear that --
12 that that is part of their purview and what
13 you're tasking them with on this.
14 **DR. ZIEMER:** Okay. Generally we don't get to
15 that level of specificity in the -- in the
16 tasking. We allow a fair amount of
17 flexibility, but they've heard your point.
18 That certainly is open to them in -- generally
19 we wouldn't mandate, for example, speak to
20 these 11 people. But --
21 **MR. STEPHAN:** That's clear to you.
22 **DR. MELIUS:** Yeah.
23 **MS. MUNN:** No.
24 **DR. WADE:** Okay.
25 **MR. STEPHAN:** We're clear. Thank you.

McKeel footnote: There was never any follow-up by NIOSH or the Board on Mr. Stephan's request to interview the 11 Dow workers to my knowledge. Dan McKeel 2/11/2011

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1 **DR. ZIEMER:** Yeah, we're -- we're fine. Any
2 comments or -- or questions? And if we can do
3 anything to -- and -- and Dan, I'm wil-- quite
4 willing to have you help me on this, if we --
5 'cause I'll prepare the letter and I'll
6 probably copy you on it before I send it in,
7 but I want to make sure that in making this
8 case to the Secretary that we make him
9 cognizant of the -- the documents that -- that
10 seem to indicate the eligibility, so --

11 **DR. MCKEEL:** I -- I guess that was my comment.
12 Unless the words "AEC thorium" are added into
13 Jim's letter, as I heard it just now, I don't
14 think the Secretary is going to be persuaded.
15 I mean -- so I think that language -- I -- I --
16 we need to provide the documents, for sure.
17 **DR. ZIEMER:** Well, without the --
18 **DR. MCKEEL:** We need to provide some kind of
19 rationale.
20 **DR. ZIEMER:** I think if the Board's in
21 agreement, we will ask that we get Dan's
22 assistance on getting some wording into that.
23 Is that --
24 **DR. MELIUS:** Yeah, I mean Wan-- Wanda and I
25 specifically added the mention of thorium to be

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1 able to make sure we captured those documents
2 and --
3 **DR. MCKEEL:** I'd be happy to --
4 **DR. MELIUS:** -- yeah, I mean --
5 **DR. MCKEEL:** -- happy to do that.
6 **DR. MELIUS:** -- that was the intent.
7 **DR. ZIEMER:** But Dan, I will -- I will send you
8 a draft and --
9 **DR. MCKEEL:** That'd be great.
10 **DR. ZIEMER:** -- as you to --
11 **DR. MCKEEL:** That'd be terrific, yeah.
12 **DR. WADE:** Just for the record, I don't think
13 there's any question in anyone's mind that
14 thorium was on the property. The question is
15 was it AEC thorium.
16 **MS. MUNN:** Yes. Yes.
17 **DR. WADE:** That's the issue.
18 **DR. ZIEMER:** And we want to refer to those
19 documents, if necessary, to -- to make that
20 case.
21 Okay, you ready to vote, Board members?
22 Okay, Dan, an additional comment?
23 **DR. MCKEEL:** No, I -- I just want to make it
24 simpler for everybody. I mean the -- the
25 documents that I showed -- here is the

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1 Powerpoint -- a printout of each slide in the
2 Powerpoint in what I gave you, so that -- that
3 -- that's all I'm going to have for those
4 documents.

5 **DR. ZIEMER:** Yeah, understood.
6 **DR. MCKEEL:** But --
7 **DR. WADE:** Thank you.
8 **DR. MCKEEL:** Yeah.
9 **DR. ZIEMER:** Yeah. Okay, thank you.
10 All in favor of this motion, say aye?
11 (Affirmative responses)
12 And all opposed?
13 (No responses)
14 And abstentions?
15 (No responses)
16 Motion carries.
17 **DR. WADE:** Unanimously by those present. We
18 should take a deep breath. Is there any other
19 business that we --
20 **DR. ZIEMER:** We have Sandia yet.

--Discussion of Dow SEC Petition concludes--