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

convenes the

WORKING GROUP MEETING

ADVISORY BOARD ON

RADIATION AND WORKER HEALTH

CHAPMAN VALVE

The verbatim transcript of the Working Group Meeting of the Advisory Board on Radiation and Worker Health held in Cincinnati, Ohio, on May 1, 2008.

STEVEN RAY GREEN AND ASSOCIATES
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C O N T E N T S

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TRANSCRIPT LEGEND

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-- "uh-huh" represents an affirmative response, and "uh-uh" represents a negative response.

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-- (inaudible)/ (unintelligible) signifies speaker failure, usually failure to use a microphone.

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(By Group, in Alphabetical Order)

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KOTSCH, JEFF, DOL
MAKHIJANI, ARJUN, SC&A
MAURO, JOHN, SC&A
NETON, JIM, NIOSH
ROLFES, MARK, NIOSH

P R O C E E D I N G S

(10:00 a.m.)

WELCOME AND OPENING COMMENTS

DR. CHRISTINE BRANCHE, DFO

DR. BRANCHE: Good morning, and welcome to the working group meeting on Chapman Valve. I just want to make certain that I've got the right people for the right call. So this is the work group meeting for Chapman Valve. It is Thursday, May 1st. I am Christine Branche. I'm the Designated Federal Official from NIOSH.

And, Ray, you're up?

(affirmative response)

DR. BRANCHE: Would the Board members in the room please announce your names please for the record?

DR. POSTON: John Poston.

DR. ROESSLER: Gen Roessler.

MR. GRIFFON: Mark Griffon.

MR. GIBSON: Mike Gibson.

DR. BRANCHE: Are there any Board members participating by phone?

(no response)

DR. BRANCHE: Is there anybody on the line? If you could just please announce so I can make sure the line is working.

DR. MAURO (by Telephone): Yes, Christine, this is John. The line's working fine.

DR. BRANCHE: Thank you very much.

Are there any Board members who've announced who have any conflict with Chapman Valve?

(no response)

DR. BRANCHE: We do not have a quorum of the Board so we can go on. NIOSH staff in the room, would you please announce your names?

MR. ROLFES: Mark Rolfes, NIOSH, no conflicts.

DR. NETON: Jim Neton, NIOSH, no conflicts.

DR. BRANCHE: Are there any Oak Ridge staff on the line? I'm sorry, any NIOSH staff on the phone would you please announce your names and say whether or not you have a conflict with Chapman Valve?

MR. KATZ (by Telephone): Yes, Ted Katz, NIOSH, no conflict.

MS. ADAMS (by Telephone): Nancy Adams, NIOSH, no conflicts.

MS. BURGOS (by Telephone): Zaida Burgos, NIOSH, no conflict.

DR. BRANCHE: Thank you.

Are there any Oak Ridge staff on the line? And if you are, would please identify your name and say if you have a conflict with Chapman Valve?

(no response)

DR. BRANCHE: SC&A staff participating in the room, please? If you could please say if you have a conflict.

DR. MAKHIJANI: Arjun Makhijani, no conflict.

DR. BRANCHE: SC&A staff by phone?

DR. MAURO (by Telephone): John Mauro, no conflict.

DR. BRANCHE: Other federal agency staff?

MS. HOWELL: Emily Howell, HHS, no conflict.

MR. KOTSCH (by Telephone): Jeff Kotsch, Labor.

DR. BRANCHE: Are there petitioners or their representatives on the phone who would like to identify their names?

(no response)

DR. BRANCHE: Any workers or their

representatives on the line who would like --

UNIDENTIFIED SPEAKER (by Telephone): Yes.

DR. BRANCHE: Sir, would you like to identify your name or just want us to know that you're there?

UNIDENTIFIED SPEAKER (by Telephone): Representing for Theodore Quall (ph), deceased.

DR. BRANCHE: Thank you very much.

Are there any members of Congress or their representatives on the line?

(no response)

DR. BRANCHE: Are there any others who would like to mention their names?

(no response)

DR. BRANCHE: Before I hand it over to Dr. Poston, I would just ask that those of you who are participating by phone, we appreciate that you're there. And we would ask that you mute your phones. If you have a mute button, then please use it. However, if you do not have a mute button, then please dial star six to mute your line. And then when you are ready to speak you can use that same star six to unmute your phone.

I understand from Dr. Poston that we will not be taking a lunch break, but we might be taking other biology breaks as necessary. So please understand that we will be working through. And again, thank you for muting your phones, and we do ask that you stick with us today.

And, Dr. Poston, it's all yours.

INTRODUCTION BY CHAIR

DR. POSTON: Thank you, Dr. Branche.

First, I want to welcome everyone here. I know it was a short fuse trying to get this meeting put together. I appreciate the fact that we have everyone here face-to-face as opposed to on the telephone. I did finally get out an agenda on Tuesday, and I think everyone has a copy of that. I'd like to stick to that as much as possible, but I'd see if there's any additions or anything that we need to add to the agenda.

(no response)

DR. POSTON: Hearing no additions, then we'll just assume that this is the accepted agenda. As Dr. Branche indicated and I indicated to you in e-mails, I would like to

try to finish today about 2:30. If we have to have an additional meeting, then we'll do that. We'll try to schedule that at some time, but I think there's a lot of things that we can do today that perhaps would resolve a number of the issues.

DEAN STREET FACILITY

The first thing I'd like to do is try to agree on those things upon which we can agree so that then we can focus our efforts and our energies on those things that need discussion and resolution. And so I have put down as the first item for discussion the impact of adding the Dean Street facility to the Chapman Valve cohort, and exactly how that would play into the work of this working group. And I'll try to explain what I mean by that.

As I understand it -- and I'm subject to being corrected -- there's a specific time period over which we're considering this cohort. And that time period is in the 1940-'49 timeframe. And even according to the SC&A review, the Dean Street facility was dismantled essentially immediately after, or

at least was abandoned immediately after the dropping of the bomb on Hiroshima and Nagasaki. So it's unclear to me what impact adding the Dean Street facility to the site actually has as an impact on this, on what we've been doing so far.

So is that a correct assumption?

DR. MAKHIJANI: Dr. Poston, just a clarification of what's in the SC&A report. The only information in this as you know is from that interview. And in the interview it was that the work that was described by the interviewee about cleaning the manifolds was terminated immediately after the end of World War II.

DR. POSTON: Well, what your report actually says is you began -- and I read the report on the plane again to make sure that I had it correct. The report actually says they began packing things and moving out of that facility immediately after Hiroshima.

DR. MAKHIJANI: Right, that's what --

DR. POSTON: Well, that's --

DR. MAKHIJANI: That's according, all I'm saying is that in the report, everything in

the report about the Dean Street facility -- as you know, well, there are two reports of SC&A. But in the first report, everything about the report and the Dean Street facility was based on the site expert interview. In the second report we reviewed the documents also provided by DOE, which are only Manhattan Project documents. And as you know, we didn't do a review beyond that at the instruction of the working group.

And so just for the record, what is in the SC&A report is really based on the DOE and Manhattan Project records and what happened after World War II in terms of work at the Dean Street facility based only on the site expert interview. That's it, and I just wanted to say that.

DR. POSTON: So let's get back to the question. Does the addition of that facility to the site because there were no activities after World War II, does that have any impact on the evaluation of this, the original Chapman Valve facility that we were charged to review?

DR. BRANCHE: Before you begin responding,

again, if everyone on the line would please mute your phone, it will enhance the quality of everyone on the line being able to hear. We hear some typing. We hear some typing on the line. If you don't have a mute button, then please use star six.

I'm sorry, Dr. Poston.

DR. POSTON: That's all right.

I mean, I'm trying to understand this situation. Maybe Emily could help. The charge to the committee was to look at this particular timeframe, and there was a certain activity inside of that timeframe that was going on. And we've established that that was only a small portion of this year and a half or so time period. And since the Dean Street facility was added, that to me doesn't have any impact on what we've done so far, but I'm ready to be corrected by members of the work group that see it differently.

MR. GRIFFON: I guess that's the question is that if the expert's account is accurate, then it would fall outside that time period. I guess that's true. I don't know if NIOSH has done any other, I don't think so based on

what's on the O drive you haven't found any other documents to corroborate that or to modify that opinion. But I mean, I guess that's --

DR. NETON: The only thing I can point to is the H.K. Ferguson report is very explicit as to what work was done and where and how in the 1948 and '49 timeframe for AEC operations. And nowhere in that report does it mention anything about a Dean Street, interaction with the Dean Street facility as far as the preparation of the slugs. Now, I can't speak to what went on at Dean Street now other than what the site subject expert said at Chapman Valve that after the war, it seemed to have been put to bed so to speak. But I can't speak as to what happened.

MR. GRIFFON: And I guess if the Dean Street facility operated into a later time period, it could still be treated separately, right? I mean, I don't think we're locked out of that time period. So either way we could separate Dean Street, I guess.

DR. POSTON: You know how you solve problems. You define what the problem is

first, define what it is. And it appears to me that if we take the opposite view, that there's nothing to refute or substantiate, then we just dissolve the work group because we can't go forward because we don't know.

But based on what I think we know or the lack of records, then I think we need to not worry about the Dean Street facility and consider the facility that we've been, that we've put so much effort into already. And if we can agree on that, then we can move forward.

MR. GRIFFON: I mean, I think as long as we can legally treat it separately I guess that seems reasonable to me.

MS. HOWELL: My understanding of what the Department of Energy and the Department of Labor have done at the facility is that they just said that Dean Street is now considered part of the facility. And in other classes we have certainly split various physical areas of a facility. So I don't think that acting on the main portion of Chapman Valve and not acting on the Dean Street portion would preclude you from being able, if information

was found or it was determined that a lack of information was substantial enough, to later have a class.

DR. NETON: Well, let's be careful because, if you recall at the last Board meeting, we modified the proposed class definition to include Dean Street. Right now it reads all employees who were involved in work at Chapman Valve manufacturing facility, i.e., Building 23 and the Dean Street facility. So if the class is decided not to be added, for example, then that would imply that Dean Street would have been --

MS. HOWELL: But you could --

DR. NETON: -- but new information could always --

MR. GRIFFON: For that time period, yeah.

DR. NETON: Yeah, for '48 and '49.

MS. HOWELL: New information can open it, and if NIOSH and the Board members were agreed, you could also renew, I mean, we could go back to the old definition that was --

MR. GRIFFON: If we didn't say Dean Street in there, I think we could --

DR. NETON: Yeah, we're not required to have

Dean Street in. We just added it because it's part of the facility.

DR. POSTON: Would we have to make a formal decision to go back to the old definition or can we --

MR. GRIFFON: I think the Board can make their own definition, too, right?

DR. NETON: It can happen several ways. Either NIOSH could amend their definition if we chose to or the Board could, in voting on this, just restrict their change.

MS. HOWELL: And the Board and NIOSH don't have to have the same definition. It's certainly helpful when we do, but it's not a requirement.

DR. POSTON: So would it be appropriate for this work group to bring a recommendation to the Board that those be separated? Is that what we're saying?

DR. ROESSLER: To me it's most easy to understand a way to do it. Otherwise, we're always going to come back to the same discussion and talk about dates and talk about the lack of any information for including it.

DR. BRANCHE: I think it would help your

fellow Board members who are not on the work group to know what your thoughts are. Whatever your recommendations are be able to provide them in writing and present them in such a form will facilitate it at the Board meeting.

DR. POSTON: Well, working group members, is there an objection to or is there agreement that we should make a recommendation to the Board that these be separated?

DR. ROESSLER: By separated do you mean go back to the original --

DR. POSTON: Right, go back to the original definitions where we're just going to focus on the Indian Orchard. We don't have any data on the, or very little.

Mike, how do you feel?

MR. GIBSON: Yeah, that's fine.

DR. POSTON: Okay, so we've agreed that we'll go back. So I'll make, at our next Board meeting I'll make a recommendation that we go back to the original definition because keeping the two together makes our job almost impossible.

Well, we're having a nice discussion.

I'm taking a minute here to write this down so the old man doesn't forget.

INDIAN ORCHARD SITE

Since we've done that I'd like to sort of interpose a three and a half agenda item here and see if there's a couple of other things that we can agree on since now we're focusing on the Indian Orchard site. Is it generally agreed among the working group members that the external dosimetry that is from the film badges and so forth is sufficient to reconstruct doses?

MR. GRIFFON: I think the data was there for that.

DR. POSTON: So there's general agreement that the external dose then the records are sufficient to --

MR. GRIFFON: Can be bounded, yeah.

DR. POSTON: -- so that we can bound them. So what I'm trying to do is peel this onion or whatever you want to call it.

So that brings us to the internal dose assessment situation, and I, as I told Arjun, I re-read the SC&A report and found it very interesting as they went to some of the other

places like Simonds Saw and so forth. And I forget the words you used in your report, but it's amazing, unbelievable or something agreement between the results at Chapman Valve and the results at some of the similar facilities.

DR. MAKHIJANI: I think the revision was not done by me, so I don't remember the exact words.

DR. NETON: Which report are we speaking about?

DR. MAKHIJANI: This must be the earlier --

DR. POSTON: This is the earlier one, 2/06.

DR. NETON: Oh, the original draft.

DR. MAKHIJANI: But I do remember there was a fair amount of discourse about these bioassay records.

DR. MAURO (by Telephone): This is John Mauro. The December 6th report goes into quite a bit of detail on the bioassay records and sort of like to validate the bioassay records. What they would mean in terms of what kind of air dust loading you might have to have to get that kind of urine, uranium concentration in urine comparing that to the large array of

different sites where we do have air sampling data. So there's quite a bit of work went into the December 6th report. It's a relatively large report not only on the external but also on the internal. But, of course, the internal focused entirely on natural uranium.

DR. POSTON: Well, I guess I was caught, I came up short here, John, because when I sent you an e-mail asking you to send me the latest report, your staff sent me the 2/06 report so that was the one I read thinking that was the latest one.

DR. MAURO (by Telephone): Oh, that's an error on our part. Yeah, of course, there's the later report, March 2008, which was prepared by Arjun and reviewed by me which specifically addresses I would say the delta issue related to Dean Street and the radiochemical issues related to enriched uranium. So it's unfortunate -- well, I guess it's good you looked at the December 6th because that's sort of like a baseline, the rock we're standing on.

And many of the issues by the way that

are identified in the December 6th report related to the fire and there are a number of issues that we do raise. All of these have been addressed and I believe resolved to the satisfaction of the working group except for the matter of Dean Street and the enriched uranium matter.

There's one other issue that I believe that really has not been addressed has to do with the later years and using data obtained during the FUSRAP Program characterization to reconstruct the doses to people who worked at the facility after termination of AEC operations at Chapman Valve. We really never talked about some of our concerns there. I would think that that kind of concern leans more toward a site profile, but I wouldn't, I'll certainly leave that to the working group. It's really a matter of how do you use the available data to characterize internal and external exposures post operations from residual radioactivity. We really never talked about that.

MR. CLAWSON (by Telephone): John? I'm calling for John Poston. I just wanted to

make sure that John Poston knew that Brad Clawson was on the line. I apologize, but I had a meeting overrun into this one, and that I am board. I wanted to let John Poston know that I am on the line.

DR. POSTON: Great, Brad, thank you very much.

DR. ROESSLER: John Mauro, this is Gen. What years are you talking about on the later comment that you had?

DR. MAURO (by Telephone): After the period of operations, which I believe is a year, year and a half, 1948, ’49, ’50, that timeframe. Then there is -- in fact, the way the petition is written, there’s various time periods that follow operations that are addressed. And one of our concerns was that once operations terminated where the majority of the exposures of concern, then you move into this residual period where all you really have is some clean up. There’s certainly quite a bit of clean up took place, and we describe that in some detail in the December 6th report. But there’s always the question, okay, what do we do about the residual radioactivity. And there was the

FUSRAP work that took place, I believe, in the 1990s where they fully characterized the residual activity. And, of course, that was the basis for further FUSRAP clean up activities. Now, one of the concerns we expressed, I believe, was that the data that was collected in support of the FUSRAP clean up was used, which was done many, many years later, I believe in the ‘90s --

DR. MAKHIJANI: ‘Ninety-two.

DR. MAURO (by Telephone): ‘Ninety-two. Was used, in other words the Becquerels per meter squared contamination on surfaces. And then knowing that level of contamination in theory you could predict what the inhalation exposures may be based on resuspension. What they did is they took that characterization and assigned that level of contamination to the post-operation years at Chapman Valve which goes all the way back, I believe, to the much earlier years, back 30 years or more. And we were concerned that you really can’t do that. There might be a better way to come at the problem than to use because so much time has passed by there’s some question whether

you can back extrapolate that way. And there may be better ways in which you could come at the question of exposure to residual radioactivity. We never really talked about that issue.

DR. NETON: John, let me remind you about the proposed class definition only covers ’48, ’49 and the petition requested ’91 through ’95. There was no petition here evaluating ’50 through ’90 at all.

DR. MAURO (by Telephone): Okay, so the --

DR. NETON: That period, it was silent in this evaluation for it because that was not petitioned.

DR. MAURO (by Telephone): No problem then, so the resolution is that that issue really goes away as long as we’re only dealing with the period of operation.

DR. NETON: It’s a profile issue, but it’s not been evaluated in this evaluation report.

DR. MAURO (by Telephone): Okay, then that helps. Thank you.

MR. GRIFFON: But can you clarify, Jim, in the later part of ’49 I thought there was a back extrapolation technique used there, too,

or no?

DR. NETON: Yes, yeah, we would use a back extrapolation technique to go back into the period, but that technique is not being evaluated in this evaluation report.

MR. GRIFFON: I thought it was for the --

DR. NETON: The ’91.

MR. GRIFFON: -- last six months of ’49.

DR. MAURO (by Telephone): Mark, I believe you’re correct. I’m looking at, I believe there’s a May 1st, 1949, --

MR. GRIFFON: Yeah, to December 31st, yeah.

DR. MAKHIJANI: I believe there is an eight-month period in 1949 --

DR. NETON: We’ve been through this before. I mean, we’ve discussed that. We looked at operations they conducted and -- I didn’t come prepared to discuss --

MR. GRIFFON: I need to refresh my memory, but I think --

DR. NETON: But that’s not what John’s talking about.

MR. GRIFFON: Oh, I thought he was. I thought that was in part. I mean, it extends beyond --

DR. MAURO (by Telephone): Let me clarify. I have to go back and read it again. I was sort of trying to read through it all early this morning. There are time periods that are residual radioactivity periods. The question I have is, are any of the residual radioactivity periods included within the scope of the matters we're discussing today?

DR. NETON: Yes, and that's 1991 through '93. That's what was evaluated in this SEC evaluation.

MR. GRIFFON: So not those last eight months of '49?

DR. NETON: Eight months of '49 are included, but those are not, we don't consider those residual. Those are considered part of the work activities.

MR. GRIFFON: How was the dose --

DR. NETON: And you're right. There were bioassay samples that were taken somewhere before the end of the operations.

MR. ROLFES: I think the last date of bioassay was October 7th, 1948. That was the last day based on the H.K. Ferguson document that we have. There is some information on

the decontamination proceedings that were documented. This is dated January 17th, 1949. It goes through the extent of the contamination that was observed at the site. I believe what we did in the site profile was to extend the intakes beyond 1948 in order to be claimant favorable. The information that's presented in the H.K. Ferguson document indicates that the contract was actually completed, that the production of the slugs was completed by the end of 1948.

DR. MAKHIJANI: There's just no clarification about the dates. I've got the ER, Evaluation Report, open here and what it said, just for clarity as to what it said. For purpose of this evaluation the period from January 1, 1948 through April '49 is evaluated as the operational period -- semi-colon. The periods from May 1, 1949 through December 31, 1949, and from January 1, 1991 through December 31, 1993 are evaluated as residual radioactivity periods.

DR. NETON: That's what, okay, you're right; you're right. So those six months --

DR. MAKHIJANI: Yeah, eight.

DR. NETON: Did we not --

MR. GRIFFON: And that's the question. Was there bioassay data there or was that back extrapolated from FUSREP-type survey data?

MR. ROLFES: For the 1949 period I believe we just extended the intakes based on the previously calculated intakes based off those bioassay --

DR. NETON: I believe we assumed the chronic intake for the entire time period based on the bioassay that was collected during the operational period. In other words it wasn't modeled as a residual contamination issue 'til '49.

DR. MAURO (by Telephone): Jim, that might be my mistake because when I reviewed the work -- now we're talking about the report --

DR. NETON: See, I didn't know we were going to go back into this bioassay issue again.

DR. MAKHIJANI: Yeah, I think on page -- I'm also not fully prepared for this, but just looking at the ER on page 21 of the evaluation report just about 7.1.1.2, there's a very short two-sentence paragraph for the post-April '39-'49 residual radioactivity period.

NIOSH reviewed the file containing the radiological survey data used in the development of the residual radioactivity portion of the Chapman TBD. So this would indicate that the ’92 data were used for that eight-month period, I think.

DR. MAURO (by Telephone): That’s my recollection also, Arjun.

DR. MAKHIJANI: The ’92. This is my recollection, also from doing the TBD review that was carried over into the ER.

DR. MAURO (by Telephone): That was my recollection, too, Arjun. And right now I’m looking at our report. Yes, and I believe it’s absolutely what was done. And we expressed some concern about that.

DR. NETON: That might have been changed in our review. Let’s see, I’m looking. Bear with me here. I think either way if we didn’t, it certainly would be bounding to use the bioassay data through the end of ’49 which is what I thought we had done.

DR. POSTON: That’s what I thought you did.

DR. NETON: Estimation internal exposure uranium bioassay. Summary for the operational

period, 1/1/48 through four. It does stop 4/30/1949; that's correct. You're right. So for that period from '48, from May 1st -- wait a minute, through '49.

DR. MAKHIJANI: May 1st of '49, I think, yes.

DR. NETON: May 1st of '49.

DR. MAURO (by Telephone): Yeah, May 1st, '49 through December 31st, '49 is the area at question. And I believe you did use the back extrapolation as opposed to forward extrapolation.

DR. NETON: Right, okay.

MR. GRIFFON: I mean, I sort of, John started this whole thing by saying it was maybe a site profile issue, too.

DR. NETON: We've got the site data here and Mark just pointed out that we've got the January 1949 survey data from the H.K. Ferguson report which is obviously much more contemporary. So between those two pieces of information, I'm pretty comfortable that we can bound those exposures.

MR. GRIFFON: We may have disagreement on how it's done right now, but it might be a site profile discussion.

DR. ROESSLER: So what is the conclusion with regard to the SEC event periods that we're talking about? Are you in agreement that this is a reasonable approach, the bounding from, and the dates, May 1st, 1949 to December 31st?

MR. GRIFFON: Well, that's the separate discussion. And I guess I'd want to qualify my answer to your previous question, too, Jim, that on the external dose I think if under the premise that everything that the operations are only as discussed in the H.K. Ferguson document, I'd say that the external data they have can be used to bound. But my problem is going back to this question of was there other operations there that are not described. And this gets back to the americium-uranium sample which we're going to, it's further on in our agenda. But, I mean, if there was different stuff going on there, then that raises questions of bounding the external.

DR. POSTON: Of course, of course. But based on what documents we have, and as I say, if you're going to put a caveat on everything, we just as well dissolve the group and go away

and say we can't --

MR. GRIFFON: I'm not the one putting an asterisk on the U-235 sample, so you know.

DR. POSTON: I mean, I think we have to resolve that, and that's why it's next on the agenda. I really want to understand that. I mean, even today with our modern computer techniques and so forth that we have with radiation detectors, it's easy to have radionuclides that show up in the spectrum be identified as something else which is -- I just want to learn more and understand more, and I'm somewhat skeptical right now because it's so close to, it could be close to natural uranium. So are we okay on the periods now?

(no response)

DR. POSTON: Okay, and so all right, I've got your caveat about if we understand that there's further activities going on or we discover other activities, then that may not apply. But as we see it now the external dose is not an issue based on the availability of the dosimetry data. We can bound it.

ELEVATED SOIL SAMPLE RESULTS

How about the soil sample results? I

looked at that again, and I'm somewhat confused I must admit. Maybe someone else can help me like Arjun or Jim or somebody.

DR. NETON: I can provide some, it's new information, and I don't know if it's going to be helpful, but it's new. After the last Board meeting we contacted, I attempted through various channels to get a hold of the authors of the --

DR. MAKHIJANI: May I interrupt? Is there a piece of paper that we can be looking at while you're speaking from this new information?

DR. NETON: It's going to be about four sentences.

DR. MAKHIJANI: Oh, okay, okay.

MR. ELLIOTT: It's not a document.

DR. MAKHIJANI: I thought there was a new analysis.

MR. ELLIOTT: It's a status report because at the last working group meeting I think it was you, Arjun, that suggested has anybody talked to whoever -- maybe it was -- can we find the guy that did the analysis.

DR. NETON: This is not new data. This is new information.

DR. POSTON: As I told the NCRP in my paper a couple weeks ago, this is a new technique called listening. I don't have any slides, no PowerPoint, no anything. They had to listen to what I had to say.

DR. NETON: So what we did was through various channels I tried to find get a hold of one of the authors. It turns out that Ray Foley, one of the authors of the 1992 FUSREP Report, authored by Foley and Uziel, has retired from Oak Ridge National Laboratory but is available for discussion.

And I've had a couple phone conversations with him now, and he's agreed to work on our behalf to try to shed some light on the nature of this sample. I only had quick call with him. He was on his way to Oak Ridge National Lab to try to figure out -- he knows where these records all are.

But he in his mind is not clear what type of analysis was done. I asked him specifically was it alpha, gamma or neutron, and he said he wasn't sure because they were changing techniques around that time period. Originally he thought it would have been

neutron, but then he backed off into I'm not sure. We were changing our analytical protocols during that time period.

So I hope to have a better update on exactly what happened, but he's working on that right now. The bottom line is even the author of the report right now doesn't know how they did the analysis.

MR. GRIFFON: Maybe he can find the reports, too. That would be great, right?

DR. NETON: Well, he actually, he was going to the lab to look at the data cards. He knows where they were. He was a team leader and was actually there collecting the samples, was in charge of the collection of the samples and the analysis of them. So if anyone should be able to help us shed more light on this, I expect he will, but we're not there yet. So that's what's, Larry's correct. It's a status update.

MR. ELLIOTT: We hope to be there within a matter of days maybe. I don't know, a month? I don't know. Before the next board meeting? I don't know.

MR. GRIFFON: There's a glimmer of hope

there anyway.

DR. NETON: It may be that those results are gone because we heard through other channels that those results may have been either destroyed or transferred somewhere where no one knew. But I'm confident if anyone could find them, Ray Foley, who knew where they were stored originally, should be able to.

So that's where we're at. Given any of those three techniques, I'm not sure, NIOSH is certainly not in a position to say anything about the 2.16 percent number yet. Because we have no idea how they were analyzed.

MR. GRIFFON: Did you follow up at all on naval operations? Because my question is if, I just have this, I think there was some information in a newspaper, some naval work was done there. And that could have been, I don't even know if it was radiological naval work.

DR. NETON: I did look into that a little bit. I didn't contact the Department of the Navy or anything like that, but --

MR. GRIFFON: But if they worked with enriched with the Navy --

DR. NETON: There were naval manifolds being made back there. Recently in one of the work group meetings that we had where someone indicated in 1943 timeframe possibly they were manufacturing valves for the Navy. They did a fair amount of contract work for the Navy as well.

MR. ROLFES: There's a picture in a newspaper article of a valve that was produced at Chapman Valve for naval applications. The valve which weighed 15,000 pounds was made of special corrosion-resistant ^ tight steel. The mammoth casting is part of the Chapman project to manufacture for atomic power installations. So, yeah, they did --

DR. POSTON: 'Forty-three?

MR. ROLFES: Yeah, that's --

DR. POSTON: I'm saying Navy in '43?

DR. MAKHIJANI: This would have been for the Manhattan Project, atomic power.

MR. ROLFES: There were separate contracts for the Navy as well, yes. They did produce, it was in the later years, Crane Company did produce, they had an atomic power division that produced valves. Chapman Valve was

bought out by Crane Company in roughly 1958, and they did do additional work in the more recent time period for nuclear reactors and for the Navy as well.

DR. MAKHIJANI: Would this be the Naval Lab in Washington that they were working for?

MR. ROLFES: I don't know.

DR. NETON: It said that this one person who was interviewed in the worker outreach meeting that was conducted around 2005 talked about work for the Navy that was done in 1943 and 1945. He specifically remembered doing some radiography on these units to check the integrity of the valves for the U.S. Navy. The exposed film was sent to the hospital. This was in '43, '45. The Navy compiled the X-rays. At least his recollection there was work in '43 and '44 for the Navy at the same time.

The other piece of information, for example, that's interesting -- I've re-read almost all this stuff again -- is that when Bechtel went in there to, you know, in 1992 ORNL went in and did a FUSREP survey, and they identified the areas of contamination.

Bechtel then went in 1995, and using those measurements, went about decontaminating the facility.

They, of course, identified that hot spot again. But in their report they indicate that that spot, they had to actually dig out the ramp to get to the contamination that was underneath the ramp. Kind of interesting, they used a jackhammer to pull out all the concrete to get to this contamination they dug out and shipped off. They don't characterize it at all unfortunately. But it was almost like fill material that was there of some type which leads me into this next area where the floor was made with fire brick in certain places.

If you look at the Bechtel report they talk about the floor was made of wood, three-by-three-by-five wooden blocks. So they essentially made a parquet floor out of, you know, the five inch went deep and then three-by-three on top, and they made a block floor out of it. Where those blocks had eroded or become decayed, the report says they replaced them with fire bricks.

So I don't know if that adds anything to it at all or not, but fire bricks are known to contain a fair amount of natural radioactivity, if you look around, up to 38 micro R per hour which is amazingly close to the reading of 32, I think, that was taken at that area. That's all speculation, just things that are sort of, that are available.

DR. POSTON: So to summarize, we basically have an opportunity maybe within a few days, maybe within some period of time to have some information to help to shed more light on this one sample, that soil sample, and how it was measured and so forth.

DR. NETON: I think there's one more piece. If you look at all of the health protection measurements that were made for Bechtel clean up, they were all made assuming that they were working with natural uranium. If you look at the values they would take air samples and transport them in the natural uranium intakes and that sort of thing. So in their mind they were dealing with a natural uranium contamination problem.

DR. MAKHIJANI: It seemed like it was an

assumption.

DR. NETON: Yeah, it was. They didn't do any more spectroscopy on them, but you're right. They assumed they were working with natural uranium.

DR. POSTON: Well, I guess to continue this discussion, I'm trying to understand what is the impact of this one sample on you folks in NIOSH to assessing doses. I mean, for internal exposure, I guess in my feeble mind, taking the approach that they did is a huge, huge overestimate of the potential internal doses for the workers. But I guess I can in the spirit of discussion, I'd be glad to hear someone else's opinion on that.

MR. GRIFFON: Well, it's not the issue of dose assessment, I mean, as we've discussed before, it's the issue of your whole story revolves around natural uranium, and here's an outlier that doesn't fit the story. So was something else going on there? I mean, if it was only two percent enriched, then I would think, sure, you can adjust your intakes, and you're already doing an overestimating technique. I would agree then.

But everything says they only worked with natural uranium, and you have this potentially outlying sample here that doesn't sort of fit the story line of the facility. So the question in my mind is what else, was anything else going on there or is this, you know, I mean, that's the question. It's more than can we adjust the dose a little higher by assuming two percent enriched. That's not really the question.

DR. POSTON: Yeah, but I understand your, from a scientific standpoint I understand what you're asking, but it appears to be an unanswerable question. We don't have the data. No one's turned up the data to indicate that anything's going on that is a, that one sample is an anomaly.

MR. GRIFFON: Well, it's one out of two. So if you want to look at it that way.

DR. POSTON: And when we talked to the folks up there, we immediately jumped to the fact that it may have come from Oak Ridge from one of the manifolds, but there's no evidence to show that there were any manifolds shipped back to Chapman Valve for testing. It was

only ones that were tested were shipped out. So even there's a conflict between what the folks are telling us in the interviews and what paperwork there is to indicate what direction things went.

MR. CLAWSON (by Telephone): John, this is Brad Clawson. That's very true, and I agree with that. We have not found anything that has said that there were any manifolds or anything, but we have not found anything that says that there wasn't either. This is part of the problem with a lot of these buildings and so forth like this. And we've had this with other site profiles and so forth like this.

We've got into it, and they've said, well, we can't find any information for this and that, and then all of a sudden stuff appears three years down the road out of some other place. I can't, on my conscience, be able to say that there wasn't something else that was going on there.

We see this at numerous facilities that a lot of these sites were interconnected with one another and did work with one

another. And just because we can't find a lot of this paperwork does not mean that it didn't happen though.

This is what we've got to come to, and I understand your issue with not, being an unanswerable question, but this is what this whole system was set up to be able to do. You know, Dean Street wasn't even into the part of it at the very beginning of it.

There's a lot of unanswered questions, and we've got to research these the best that we can to make sure that when we give this to the rest of the Board, that we have uncovered every rock that there is.

DR. POSTON: So should I adjourn the meeting, and we should go look? I mean, what do you, what are you saying?

MR. GIBSON: I'm with Brad. I mean, was this an anomaly or not? And if you're just going to depend on DOE's records to rewrite history, I think we all agree, that's why this program's in effect because of DOE's poor record keeping. So you can't look at the records that are there that they have generated and maintained as an adequate record

of history.

DR. POSTON: What are you going to use, Mike?

MR. GIBSON: Well, I would value more a worker's opinion even if it was a worker that was 80 years old than DOE records.

DR. POSTON: I'm not saying that we discounted the ^. I've said it a couple times, you know, I went up there with Arjun and John, and we heard what they had to say. And even though there are no records that those manifolds came back, the folks remembered it quite well, and they pointed to a window and said they were about as big as this window. And Mark was there, and they have very vivid memories.

MR. GIBSON: We're not going to get an answer for what we're going, we should use, but I don't think we can just --

MR. GRIFFON: Well, I mean, but, John, you also said we've got an unanswerable question. But I think the law allowed for that potential, and that's why we have the SEC. If you can't answer a question, then we have a timeliness issue and a bounding issue.

DR. NETON: Can I point one thing out though? I've said this several times, but maybe it bears repeating again. The SEC class is specifically for evaluating the exposures in Building 23. That was a 16-by-200 foot area carved out, the project was carved out. And that's what we reconstructed.

We have very good details of all the material that was used in that project for this year and a half, which was uranium slugs, natural uranium slugs, no indication of any enriched uranium being processed in the facility. It was specifically put in place for this project. I see no evidence of any enriched uranium being used or in this little area. I don't disagree that we don't know what happened outside of Building 23, but that's not what we're looking at.

MR. GRIFFON: But the sample. We've been through this, too, Jim, the sample was in Building 23. It might not have been in --

DR. NETON: Yeah, underneath the loading dock. They would jackhammer out --

MR. GRIFFON: It wasn't a soil sample first of all, right?

DR. NETON: Yes, it was.

MR. GRIFFON: I don't think they jackhammered to get the sample, did they?

DR. NETON: Not the sample, but it was a couple centimeters worth of soil, which is about 120 picocuries per gram. What I'm saying is how does that affect the reconstruction of this project that went on in that building. And that's the only project we know went on there because it was an AEC secret project with guards stationed at the entrance. There's no evidence that anything else happened inside this little 60-by-200 foot area.

MR. ROLFES: I'll add a statement from this report --

MR. GRIFFON: The only piece of evidence is that one, is the sample, the sample that we've been talking about for months.

DR. NETON: Yeah, right. But if you're going to throw away all that data and say, well, that one sample trumps --

MR. GRIFFON: So do you throw away one out of -- again, this is 50 percent of the samples that came up enriched. It only took two that

they did, did isotopic analysis on.

DR. NETON: So are you saying then that there was enriched uranium throughout Building 23 that we don't know where it came from?

MR. GRIFFON: I'm saying I don't know. And I'm saying I agree with you. Everything we've seen about that project indicates -- or was that the only project in Building 23? I don't know.

DR. NETON: The way it's written up it is.

MR. ROLFES: The DOE researched their information and that was the only thing that they had found under this contract that occurred at Chapman Valve, under Contract 74 --

DR. NETON: Radiologically, and now you're also talking about a sample that was taken and was found 50 years later after the project, and now you're saying, well, it more than likely, could have likely happened in the middle of the project where we have no indication that there was any other radiological work going on.

MR. GRIFFON: We're in the tricky position of refuting data that we're later going to

rely on for doing these back estimates for the resuspension doses and everything else. I mean, we've relied on FUSREP data in quite a bit of the site profiles, I believe, to back extrapolate things for non-active periods, and now because one sample doesn't sort of fit the bill here, we're saying it might be, we don't even know, but there might be uncertainty --

DR. NETON: Are you saying all the samples they didn't measure for enriched then, are probably enriched now? Is that what you're saying?

MR. GRIFFON: No, I'm just saying you're saying you can throw this one out because it doesn't fit the story line. That's what I'm concerned about. We can't just ignore it because it doesn't fit the story.

DR. POSTON: But we're not ignoring it. Jim just stated he was --

MR. GRIFFON: Right, so you're following up on that. I think that's where we're at with that one. I don't know.

DR. POSTON: We have no intention of ignoring it. We're trying to understand it. I mean, I certainly would like to understand

it better.

MR. GRIFFON: Me, too, and I'm not, I put it out there the question in my mind of the other things including other non-covered, like the naval operations because a lot of these facilities did do naval nuclear work. And if that is tracked back and we find out that they were working with enriched uranium from the Navy, that could very well explain the sample, and it's not even covered, so we don't, you know, we wouldn't have to do anything with it really.

DR. POSTON: Well, they wouldn't have been doing any work for the nuclear Navy in 1948.

MR. GRIFFON: No.

DR. POSTON: And this is the thing I raised at the very beginning. Are we going to focus on that period where we feel like we have good data as to what went on in that room in that facility or are we going to look at all other eventualities? I mean, maybe something did go on. I don't know. I don't understand the sample yet. But the sample was collected a long time after this activity was over. We've found no evidence that they did anything but

uranium rods and cutting and knelling (ph) those rods, and then shipping them to Brookhaven for use in the reactor. I haven't seen any evidence anyone has brought forward that says there was something else going on. If there was, then isn't it appropriate that we do something else? I'm trying to bound this problem for this working group. And we're what-iffing ourselves to death here outside our timeframe.

MR. GRIFFON: I think you have seen evidence that they've done something else, and that's that sample.

DR. POSTON: That one sample, yeah.

MR. GRIFFON: Well, you haven't seen no evidence.

DR. POSTON: We've seen that one sample, one out of two. You can play that either way, Mark. But the fact is I'm trying to bound this problem so that we can make a decision or delay it further and wait for what we hear from Oak Ridge, from the work that Jim's doing.

MR. ELLIOTT: I think it's appropriately stated to wait until we can get some more

information or resolution as best we can on that sample, but I think it bears saying that it's so difficult to prove a negative here, and we may not find more information about that sample. And the working group's going to be faced with what you're still faced with today. I think you know that's stating the obvious I guess.

MR. GRIFFON: I mean, but the other thing you can do is to at least lay out how we can separate Dean Street out. I mean, I think that's a reasonable thing.

MR. ELLIOTT: Separate Dean Street? I'm sorry. I was preoccupied. When I first sat down in here you all were talking about that.

DR. POSTON: The Dean Street facility has been added, but we decided that since there was a different period, that we would recommend to the Board that it be taken out again so that we have a problem that we can get our hands around. So we agreed to do that.

Well, Mark, you mentioned that -- this Mark -- you mentioned the fact that we could do the calculations using the elevated uranium

sample or using data from the elevated uranium sample and recalculate the internal doses. You said that was a possibility.

MR. GRIFFON: Yeah, it's not a question of --

DR. POSTON: It's not going to change the doses significantly.

MR. GRIFFON: Right, not being able to bound the doses. It's a question of do we know the operations that went on there.

DR. NETON: Well, ^ machining operations in Building 23. We know that.

MR. GRIFFON: The what?

DR. NETON: Machining operations, grinding, cutting, sawing.

MR. ROLFES: Every step of the process is clearly detailed in the H.K. Ferguson.

DR. NETON: ^ brought in special machines. You know what the airborne is going to be in Building 23 based on the bioassay data.

MR. GRIFFON: I mean in terms of the materials the question of was there, other than what's described in the H.K. Ferguson, was there something else that went on in that building. And it certainly could have been

later or earlier. In my mind it was probably later, but I don't know that overlapped that one '48-'49 period.

DR. NETON: What I'm saying though is if they did something with uranium that was enriched in Building 23 in 1948 and '49, we have diagrams and layouts of all the machines and operations that would have been conducted there. And we have bioassay samples on what we believe will represent workers from that operation. So if they did process enriched uranium, we could double the dose from the intakes or double the dose of enriched uranium.

MR. GRIFFON: Number one, that hasn't been put on the table, your evaluation report. But number two, I mean I would almost think that's just this question of throwing a higher number at the problem, you know. You haven't really answered whether they really did enriched work. You're just going to say, well, --

DR. NETON: All we're saying is, say that you can't. Say it never comes to light, any of these records, we'll still have no knowledge of that. So then what we're saying

is if it's the general belief that enriched uranium was processed there, then that's how we'll, an approach.

MR. GRIFFON: That's a possibility.

DR. POSTON: Well, yeah, it seems to me in an effort to move forward if we make that assumption that's a reasonable assumption.

DR. MAKHIJANI: I don't know. I think there may be some technical difficulty with that because there was processed steel, regular work going on in that building after 1949. And so, and that's, of course, the natural uranium gets deposited. So when you measure something that had layers of natural uranium deposited on it from other contamination, then I don't know what the procedure would be to determine the actual enrichment of the work that was done.

Presuming if there was work that was done, I think it would be a big problem in my mind, a technical issue as to what the enrichment was. Basically, I think it's an issue of determining whether there was anything done or not in my opinion.

DR. NETON: If we're forced to prove a

negative that's not going to happen. We can't do that if that's the standard.

DR. ROESSLER: What would you propose is the worst-case scenario during that timeframe? Describe to me what you think could be the worst case, and then I think we have to look at that and decide how would it affect the doses. That's, after all, what we're after.

DR. MAKHIJANI: I actually would be very hesitant to say because anything that I said would be just speculation because --

DR. POSTON: I agree with that.

DR. NETON: I totally agree with that.

DR. MAKHIJANI: It would be completely speculation. All we know is that they tested two samples for enrichment and assumed everything else was natural, and one of the two came up with this measurement that is being investigated. So that's not a lot of information to go on.

MR. ELLIOTT: What was the purpose of that sampling effort? What can we say about that?

DR. ROESSLER: Good question. Good question.

MR. ROLFES: I just wanted to say that there

wasn’t an assumption that everything else was natural uranium. It is very clearly documented that in the machining of uranium for Brookhaven reactor, the very first sentence states the metal for the Brookhaven reactor consisted of natural uranium slugs of the same overall dimensions as those used at Clinton, and it goes on.

MR. GRIFFON: I think it is worth running down, I mean, maybe we come up empty, but because that question, you know, if that’s the case, and if what you guys are, and what we’ve found so far is the case, it strikes me that nobody would have addressed that in those reports when they did the, when they come out with a 2.1, 2.2 percent.

DR. NETON: I asked that question.

MR. GRIFFON: There has to be some explanation like wait a second, we weren’t expecting this and then --

MR. ELLIOTT: Go back and --

MR. GRIFFON: Resample or something, yeah, but we don’t have any of that. Maybe they did it.

DR. NETON: I specifically asked Ray Foley

that question. They were not going in there with any expectations in mind other than they were a contaminated ^. They kind of had a general knowledge of what went on. And I asked him why they specifically chose that sample to analyze. And he said because it was one of the first samples they saw, and it had a high --

MR. GRIFFON: High exposure, right, right.

DR. NETON: So that just triggered their mind, and they pulled it.

DR. MAKHIJANI: Don’t misunderstand the import of what I said. I agree with you, Mark, that if you look at the documentation from the period about what they were doing in regard to the machining and the Brookhaven, they were doing, I mean, the best, most sensible conclusion from the documentation is that they were doing natural uranium slugs for the Brookhaven reactor.

What I said in regard to the assumption is directly from the 1987 Oak Ridge measurement protocols is when they took these samples, they analyzed the U-235 content, and they assumed that the samples were natural

uranium and calculated the U-238 from that. I mean, that's stated in the --

MR. GRIFFON: ^ methodology.

DR. MAKHIJANI: So that's the FUSRAP methodology that was adopted, and then they did these two samples to investigate whether there was enriched uranium or not, and we have the result. So that's just a matter of what they did during the FUSRAP and not the documentation from the period.

DR. NETON: Right, I think it would stretch credibility to believe that all those samples were nothing more than natural uranium up in the rafters and the joists because we know what they did. They processed tons of uranium through that facility, and it's pretty contaminated and to suggest that it's not natural uranium would be plausible.

MR. GIBSON: Just look at samples from the rafters and everything else, you know, to me the structure of that floor and the way it was built was wooden blocks. That porous material will absorb any history that that building has had, and you can go by and take a survey and not see something one day, and the next day

when the weather changes, you're going to have contamination showing up.

I mean, that was the same at Mound in M Building. Floors were made like that to absorb vibration of machines. But supposedly no hot work was done in M Building, but they take surveys through there for years, and there's nothing. One day they'll come through there, and they'll have to rope off total areas as contamination areas. A month later it goes away.

DR. NETON: All I can say to that is that this act is to reconstruct dose from AEC operations and activities. We have right now knowledge of two contracts only that Chapman Valve had with the AEC. One was the manufacture of valves that were original valves that were shipped to Y-12. The second one is to process these slugs. There's no other contracts that have come forward that we know about that they did any other radioactive work for AEC. That's all we have.

MR. ELLIOTT: We asked DOE specifically --

DR. NETON: And DOE went and combed their records --

MR. ELLIOTT: -- to look for that. So if your assumption is that this enriched sample may represent other work that's not been characterized, you also are presuming in that assumption that DOE, for whatever reason, is being inaccurate in their response to did they have other information.

But at the end of that day -- the Board can exercise its prerogative -- but at the end of the day we're only going to be able to reconstruct the dose on what's called, you know, uncovered exposure for the activity that's designated at that facility. But we can't presume or you can recommend that there may have been something else that happened, but we can't presume it did unless we have some documentation to support that.

MR. GIBSON: Well, I'm not necessarily saying it's even a covered activity. But I'm just saying that type of material is going to absorb every bit of history that's ever been there.

MR. ELLIOTT: I don't disagree with you at all.

MR. GIBSON: It could be someone just

dragging something through the building.

MR. ELLIOTT: They run a little tow motor in one building and bring it into the next building with that floor and run it across that floor, sure.

DR. NETON: I guess it's my point though is if it's not a covered activity that happened during '48 and '49, it's not relevant for our evaluation report.

MR. GIBSON: I don't think that's clear at this point.

DR. NETON: We don't have any contract in 1948 and '49 other than this contract right now that generated any kind of radioactive contaminant. We can't find any. There's none we can locate.

MR. GIBSON: Again, I fall back on DOE's poor record keeping history. Oversight at 30,000 feet throughout their history.

DR. NETON: Well, and you can say that, but --

MR. ROLFES: They did do well on the documentation presented in the H.K. Ferguson report. I could certainly say that they did a very good job. This is a very complete

report. This is probably one of the most complete reports that we have had for any given facility in the details that are presented to us. It's one concise report.

DR. NETON: It's very concise.

DR. POSTON: Mark, you would like to say something?

MR. GRIFFON: I was going to say I don't think we have many follow-up items or many areas of disagreement, but I think we need to really wait on Mr. Foley and what he finds out, if he finds out anything, and --

DR. NETON: I guess, I don't know. You could delay or you could say, well, what if it's not enriched? What's the Board's opinion? What's the working group's opinion? You're going to have to face that issue at some point.

MR. ELLIOTT: Either way. If he confirms that it's enriched and it was an anomaly, and they never followed up, you're still going to have to deal with that. And if he confirms I can't find anything on it. I had no idea what we did, why we did it back then, you still are faced --

DR. NETON: I guess that's what I'm saying. There's only two possible outcomes here. We either know what the sample was, and it was truly enriched, back to that, or the sample does not conclusively demonstrate that it was enriched because of some analytical issues with the sample.

DR. POSTON: If there was no -- back to what we agreed at the last meeting which is that the internal dose is of sufficiently bound based on the assumptions that you guys made for that exposure period.

DR. NETON: I think it's going to be a little murkier than that in the sense that we're not going to be able to say it wasn't enriched. The best we'll be able to say is it's not statistically significant that it was enriched because there is already a number that says it was enriched.

DR. POSTON: I misspoke.

DR. NETON: Well, I just wanted to be clear.

DR. POSTON: The other option though is if it is statistically significant, then one approach would be to essentially double the doses. That would also bound the internal

dose, right? Is that correct?

DR. NETON: If they worked with uranium slugs that were two percent enriched, yes, that would be the case.

DR. POSTON: I mean, that assumption bothers the heck out of me, but I mean, one approach -- I'm not suggesting that it's the only approach -- one approach is to say, okay, the data says that they worked with natural uranium, but we found this enriched uranium, so let's make the assumption that the entire covered period they were working with uranium at two percent.

DR. NETON: I would say it would bound it if we agree that that's, if we know what work went on there, which was machining of uranium. And say for some reason unbeknownst to anyone, they processed a few uranium slugs that were enriched that no one knows about. It would be hard to imagine, but that would certainly be a bounding scenario.

DR. ROESSLER: What I'd like to revisit is the doubling of the dose. Where does that come from? How do you come to that?

DR. NETON: It's just a fact that the dose

per unit intake from enriched uranium has a higher amount of alpha activity due to the Uranium-234. So you just intake a lot more alpha --

DR. ROESSLER: So you would assume that all the time they were working with enriched uranium?

DR. NETON: Right.

DR. ROESSLER: Which to me seems like, and what I was trying to get out of Arjun is, to me that seems like the worst-case scenario.

DR. POSTON: That's a huge stretch.

DR. ROESSLER: And you're bothered by it because you think that's a huge --

DR. POSTON: Well, I am bothered by it, but it is a huge stretch, and it would allow us to say that the doses are bounding. I mean, we've already agreed that as we understand what went on there that the external doses are bounded by the film badge data. And what we're trying to do is provide, can we provide doses for the internal exposures or not.

And so one approach is to assume that the uranium sample is not statistically relevant. We're back to what we agreed last

time that what NIOSH has done in making this conservative assumption that these people were exposed to the maximum concentration for the entire working period and calculating the doses based on that exposure is bounding.

DR. ROESSLER: Is that a productive way to go rather than just wait and find out what we are going to find out as to talk about that particular --

DR. POSTON: I would be happy to do that. We can adjourn to the dining room and have lunch, and Christine could make it home, and Jim could go play golf this afternoon.

MR. ROLFES: Please also keep in mind the way the initial intakes were calculated in the site profile, we used the two highest uranium urinalyses to calculate intakes. We assumed that the production occurred from January 1st, 1948 through April 30th of 1949. So we've assumed roughly 16 months of production-level intakes that were incurred for everyone that worked in Building 23 --

DR. POSTON: When we know it's only a fraction of that.

MR. ROLFES: -- when we know the actual

production operations were only conducted from May until October 7th of 1948, so roughly, say, six months of production-level intakes versus the 16 which we've assumed based on claimant-favorable assumptions.

MR. GRIFFON: I think we've beat that one around plenty. I mean, I'm on the record saying I think that is conservative assuming the sample can be explained as enriched. So that's where I'm stuck.

DR. NETON: I still have trouble figuring why that's important for bounding doses for this exposure that we know occurred. This is the only AEC operation that we know, we've been able to find, that exposed these workers --

MR. GRIFFON: You said that we know of. I mean, I don't think we have evidence of is a good question, and this, this is...

DR. NETON: We don't know that it's AEC exposure. We don't know if it's AEC, and we don't know when it occurred.

MR. GRIFFON: I agree.

DR. NETON: You'd have to believe that there's some contract that we don't know about

that happened in ’48 and ’49 that exposed these people to radioactive materials that was enriched uranium.

DR. ROESSLER: And that wasn’t --

DR. NETON: -- that happened in Building 23, which we have a very good accounting of exactly what they did.

DR. ROESSLER: That didn’t show up in the bioassay.

DR. NETON: Well, we did a mass uranium measurement, so you wouldn’t be able to tell if it was enriched or not.

DR. ROESSLER: But still it would, the bioassay would, if it did occur there it seems like the bioassay reflects what they were exposed to.

DR. NETON: Well, that’s what we’re saying. If it was enriched uranium --

DR. ROESSLER: That’s why I can’t figure out why there’s any doubt about using this conservative bioassay data even with a question. It seems like you’ve got it covered. I just don’t understand why that doesn’t cover it. And I’d like somebody to explain what is --

MR. GRIFFON: It's just a question of did it, I mean, I'm not arguing that, first of all, it's total uranium bioassay, but I'm still not arguing that you can't be conservative with that estimate based on what we know, as Jim said, of what was done in that building. It's this point that's been discussed in public meetings for over a year now I'm sure that I think if we can find an answer to and get rid of it, then it appeases everyone, even the public and everyone, that we've found, you know, we've got an answer on why. Instead of, I don't want to be in a position where we're trying to explain something away. If we have an explanation for it, if his reports say something more, I mean, I would argue there's three things in my mind that I would like follow up on.

DISCUSSION OF DOE FOLLOW-UP INVESTIGATION

I don't think anybody ever followed up on the Y-12 shipping records. I know it's later in your agenda. I didn't want to get ahead, but it seems like we're circling around there. But the Y-12 shipping records, and I think that was a really, we asked DOE to --

MR. ELLIOTT: I thought they did.

MR. GRIFFON: I don't know if they did. I didn't get a sense that they, they said they hadn't had any --

MR. ELLIOTT: We can verify that by asking --

MR. GRIFFON: We can verify it, yeah.

MR. ELLIOTT: We should do that. My --

MR. GRIFFON: It's not a NIOSH task.

MR. ELLIOTT: No, but my ^ to scour everything they could and included that.

MR. GRIFFON: Maybe it was a matter of them saying they couldn't find anything and Bob Presley saying I know that stuff's there or something. So maybe we need to push --

DR. NETON: Let me ask you. What would this do?

MR. GRIFFON: The only thing that would do is that question of manifolds being returned. And then if that was the case, then we could attribute it to Dean Street and maybe separate that whole thing. At least that would provide an explanation.

DR. NETON: I could tell you I've looked through all the contracts for 1948 and the

amendments of the contracts, and they're all out there on the O drive. And the contract itself speaks specifically about manufacturing like a couple thousand of these huge valves. And it's a one-way shipment from there to Oak Ridge, and all these acceptance testing criteria that were applied at the Dean Street facility. And there's not one memo -- we have a listing of all the memos that were generated in '48 and '49. I guess 50, 60 memos that were generated, and not one speak about in that time period of anything coming back other than --

DR. MAKHIJANI: You mean '43 to '45.

DR. NETON: 'Forty-three to '45, I'm sorry. But my point is we have a listing of all the memos, the correspondence, from that time period, and there's not one memo that I could find that says, by the way, we're waiting those contaminated shipments to come back here, those samples.

Everything is a one-way street shipping brand new valves that have been factory acceptance tested using very similar techniques that the subject matter expert

talked about that she thought were in regards to repair. In fact, those same techniques were applied to the brand new manifolds when they were being factory acceptance tested which is the coatings and the abrasives and all that kind of stuff. So there's a fairly good record here of memos for that entire two-year period, and not one memo speaks about that. I think that's pretty clear.

MR. ELLIOTT: A couple different questions for DOE to answer. Were there other contracts? What did Dean Street mean to this covered facility designation? Was there other contracts? What did that mean? And I thought there was another one or so that we asked.

MR. GRIFFON: I thought I mean, maybe that's just a matter of clarification. Maybe I'm misremembering, but that alone with the question about the Y-12 shipping records along with question of can we do -- and I don't want to, I don't know how big of an effort this would be -- but is there any way to find out whether there were Naval operations involved with enriched uranium at the facility. There's probably no quick or easy way or you

would have done it already I'm sure.

MR. ELLIOTT: But we know that this facility changed hands, was bought out and operations were held in that facility under a new owner, too. So we'd have to check also those subsequent owners, right?

MR. GRIFFON: I mean, I don't know if DOD would have any of these records.

MR. ELLIOTT: Well, ^ I'm going to say it. We get nothing out of DOD. We get nothing but a cold shoulder. I'm sorry to say that.

DR. NETON: And, frankly, I'm afraid to say if we do that, we find nothing, we'd be in the same position. You can't prove that either. I mean, we can always get down that road.

MR. GRIFFON: Well, and the last one is the Foley report, I guess.

DR. POSTON: Jim, I don't want to start an argument with you, but I do want to express a little different opinion. And I understand that you have all the paper, but the thing that sticks in my mind is those folks when we talked to them, they specifically testified -- not testified because they weren't under oath -- they specifically remembered those

shipments coming back from Oak Ridge. And they were very precise about it.

DR. NETON: But there were shipments coming back, but they weren't manifolds. They were test equipment that was shipped to --

DR. POSTON: They said they were big tanks.

DR. NETON: Right. Those are not manifolds. Those are pressure tanks that are used to test these vessels.

DR. POSTON: Well, okay.

DR. NETON: I think it might be worth getting back with this subject expert and just, not to challenge, but to just sort of, in light of the facts as we know them now, to sort of try and --

MR. ELLIOTT: You may want to lay it out in front of her and just say here's what we have. How does this match up with what your recollection is? And maybe --

DR. POSTON: Maybe I can get Arjun to help here, but my recollection is that she said not only did she remember them, but she typed most of the shipping orders or something like that. Is that, do you have some sort of recollection of that?

DR. MAKHIJANI: I agree with you, Dr. Poston. She was very specific about saying manifolds. Now, there could be a misunderstanding. I'm not saying that. It's just a characterization. And I found her memory to be very remarkable because she was so precise.

And she remembered the names of the people who she wrote letters to and what she ordered in terms of equipment and that was returns of manifolds on rail to the main site where it was transferred to truck. So, we don't have another explanation. All I know about it from the point of view of returns is what we have documented from this expert.

DR. POSTON: And I'm not disputing anything you said.

DR. NETON: I'm not either. I mean, I've gone through all the memos, and I can't find one memo -- as a matter of fact, she may have typed some of these memos. I haven't gone into that level of depth. But there are memos about, typed memos, saying please ship these here by rail to the facility and drop off here, and they'll be. It's very similar.

DR. MAKHIJANI: I have gone through as part of our review of your revised ER, I also looked at all the documents. And as we said in our report, we have no disagreement about what's in those documents. Those documents are all about manufacturing manifolds and valves and shipping to Oak Ridge. And as we said I believe pretty explicitly, that in those documents there's no evidence of returns. But that's very clear.

DR. NETON: I'd be surprised, we have all the documents in those time periods and these other ones would be just -- I think it's worth, I don't know if it's worthwhile.

DR. POSTON: Can we go back to, whose action would that be if we went back and talked to her again?

MR. ELLIOTT: I think it ought to be a joint action.

DR. NETON: Yeah, I think it --

MR. ROLFES: I think it would be a good idea.

MR. ELLIOTT: I'm sorry, but I just think it needs to have the stakeholders' representativeness at this point.

DR. NETON: It might be worth waiting on the sample results before we do that because in my --

MR. ELLIOTT: It may go away. Why frustrate this poor lady.

DR. NETON: Yeah, I mean, I don't want to confrontational mode.

MR. GRIFFON: Yeah, eight people interviewing, yeah. She's got to be pretty old.

DR. ROESSLER: Be careful what you say about being old.

MR. GRIFFON: As old as me.

DR. POSTON: Because she was actually a young woman, I mean, in her 40s.

DR. NETON: All I just thought it was uncanny how the description in these memos matched almost exactly to what she said. And it was something different than what she said it was.

DR. POSTON: So the two issues, the two things that we've somewhat decided was we're going to wait to hear from Foley on the samples.

DR. NETON: I expect that to happen soon.

DR. POSTON: And if that doesn't remove the concern then we may schedule another trip to Springfield to see if we can talk to these. And I don't know whether it, I guess, it would be better for us to go there than trying to get her. You have all the records.

DR. NETON: Well, they're all right here.

DR. POSTON: So it's not that big a deal.

DR. NETON: No.

MR. GRIFFON: Can we follow up on this Y-12 question? Maybe it's my misremembering --

MR. ELLIOTT: I'll send an e-mail on that to Pat Worthington, and I'll ask her to confirm whether or not they examined in their search for Chapman Valve and the Dean Street issue and this manifold transfer issue, did they check the shipment records for Y-12 to Chapman Valve for any --

MR. GRIFFON: I mean, the --

MR. ELLIOTT: -- any product or anything like that. Enlighten us here.

MR. GRIFFON: I'm curious if they --

MR. CLAWSON (by Telephone): Hey, Larry.

MR. GRIFFON: -- you know, if they were done onsite checking for records or had the local

DOE check, not just a review of their archives, records in D.C.

DR. BRANCHE: We need a person to mute the phone, please.

I think somebody had a question for you, Larry.

DR. POSTON: Brad, did you have a question?

MR. CLAWSON (by Telephone): Yeah, I did. I can't hardly hear you guys because somebody hasn't got their phone muted or whatever. But what I wanted to bring up to Larry is he was talking to Y-12 and so forth like that. I've dealt in the manufacturing area before, and a lot of times when we send out products and, yes, they made all the criteria, all of our pressure tests.

They may get back there, and they may get, there may be a malfunction in one or tracked or dropped, and it always came back to us to be able to repair these, to make them to the standards they wanted. I hope that we would look into and make sure that we look at any kind of the return receipts for anything like that for any of these shipments.

I know it'd probably be easier for the

ones just going out, but a lot of times if there was a malfunction with one, or one was dropped, they would always send them back to these facilities to do the repairs so that they meet their criteria that they need. I just hope that we look into that.

MR. ELLIOTT: I will ask that question Brad. It's a valid point. I'm working on an assumption that DOE has done that, but we'll verify that they have or have not.

DR. NETON: I'm looking at their report here, and actually, what it says is for the Oak Ridge Y-12 facility using all possible key words identified for this site, Oak Ridge Y-12, the Department of Energy's National Security, the NNSA, performed comprehensive searches of all records in our custody for any documents on Chapman Valve. The only documents they found were 37 drawings that were in there.

MR. CLAWSON (by Telephone): Well, and I understand that.

MR. ELLIOTT: That's shipment records and return receipt.

DR. NETON: Chapman Valve would have been a

key word if there was a shipment record with Chapman Valve, but we can ask that question.

MR. CLAWSON (by Telephone): We need to look into this because I am not trying to slam DOE or anything else like that, but I got to take the -- this is in today's time -- I have to go out and have my picture taken by the side of a building that they said didn't never exist. And that was just done yesterday.

So as I said when I came back to Cincinnati when this program first started going, that if we are relying on just the data of DOE, we're in for a world of hurt. And I talked very in depth to Larry about that, but you know, we've been given this project. This is what we're trying to do. The thing is is we need to make sure that we have overturned every rock we can so that when we put this out that we've done the best that we can. That's my main concern.

And I really have an issue with a lot of, and I understand John's frustration and so forth like that, but I have a real heartache with a lot of these documents and stuff. You know, these searches and stuff like that, a

lot of these searches haven't shown a lot of stuff, but all of a sudden papers that have came up, when they're switching from one computer program to another, there's a lot of things lost. And I just, we need to do the best, in my mind, we can. And if we can't, my personal opinion is we've got to fall towards the claimant-favorable situation. Thank you.

DR. POSTON: So basically then to summarize what we've been talking about, we would wait for the results from or any feedback from Mr. Foley. Larry's going to contact DOE and Pat Worthington about more records regarding shipments and returned shipments especially if those pop up on a... And then we may actually make another trip back to Springfield to talk to the folks up there about what they remember and so forth although they were pretty sure. I understand that because I feel the same way sometimes. I can take the health physics research reactor apart in my sleep, and it's been 40 years since I worked there. So you remember, it's amazing the kind of crazy things you remember.

Mark, do you want to say something

about when you say ORAU, is that what you were talking about, the O-R-A-U results? You were talking about actually the ORNL results?

MR. GRIFFON: ORNL, yeah.

DR. POSTON: Yeah, your e-mail said O-R-A-U. I just took it literally. Okay, so we've got that.

Other records, I'm not sure --

MR. GRIFFON: That note I put in, just as a, and I think Jim followed up on this. This is the question of when Bechtel did the clean up, and I think you found some of the --

DR. NETON: No, there's a full report. There's a document I've gone through, 787-page docket that Bechtel filed after the clean up. And I've searched for enriched uranium, looked for it, and saw nothing in there.

MR. GRIFFON: I had mentioned in past meetings this question of was there any manifest, was there any records of manifests that went to waste disposal, but I don't think you had any luck finding that, right?

DR. NETON: No, but even within that document they would have identified if there was enriched uranium.

MR. GRIFFON: They assumed, as you said before, it was all natural, right?

DR. NETON: Yeah, they assumed it was all natural.

MR. GRIFFON: The shipping records, the waste records would probably match that, I'm sure.

DR. NETON: Exactly. In fact, I think they could have done that because the shipping criteria, I think, for shipping small amounts of enriched like that were similar to just natural uranium. So there would have been no motivation on their part to segregate it legally as like a fissionable material because it was so low I think.

MR. GRIFFON: Well, the sites have limits on grams of U-235 usually, to use that, separate that out.

DR. NETON: But I did go, and in fact I --

MR. GRIFFON: And that was certainly placed in the '90s.

DR. MAURO (by Telephone): Jim, this is John Mauro. I have a thought question that it might be helpful here. What I heard, which I wasn't aware of until this conversation, is

that the methods used by the FUSRAP folks were to grab the samples and do an analysis of the samples for U-235 and then based on that activity in the sample they estimated the U-238 and U-234 content of the sample. Is that a correct statement?

DR. NETON: I'm not sure that's correct.

DR. MAURO (by Telephone): Okay, because that's what I heard earlier. It did sound a little unusual.

MR. GRIFFON: The neutron activation methodology, but we don't know if that's what --

DR. NETON: Yeah, if you look at their methodology, that's exactly what it says. But in this particular case I can't imagine that they would have done that because then they couldn't have decided if it was enriched uranium.

MR. GRIFFON: Exactly.

DR. NETON: There's sort of a logic flaw there.

DR. MAURO (by Telephone): I do want to point something out. I think this is probably a consideration. If they did do that, then

that means the estimates, whatever they estimated for U-238, were, and there really was, let's say, a considerable amount of enriched uranium of any level, you would have a lot more U-238. In other words the estimated activity, I'm trying to figure out how that would affect the amount of U-238 that now is being reported.

DR. NETON: Well, I think if you look at their report, it's pretty clear in my mind that they quantified U-238 by gamma spectroscopy. Because there's numbers for all of them, and they did gamma spec, and they pulled these two samples out and said we want to do isotopic analysis for uranium on them. The question is how did they do that analysis for isotopic uranium. And we don't know whether it was alpha, gamma or neutron. Now if you look at their neutron procedure, it says, the neutron procedure is sort of generic in the sense that they're trying to quantify total U by that procedure, not enrichment. But if they already knew the amount of U-238 based on the gamma, and then they could measure the U-235 using neutrons, then they've

got their enrichment. I would suspect that's what they would have done. But we'll wait to see if Ray Foley can elaborate on that.

DR. MAURO (by Telephone): Okay, okay.

DR. POSTON: That reminds me, you raised manifest on waste disposal and Mike raised an issue about the floor. I don't recall any discussion of what happened to the floor. I remember the discussion that the floor was made of blocks, but were they removed, disposed, how were they disposed and so forth.

MR. ROLFES: We do have information from one individual who said that he had assisted in washing down the walls following the machining operation that was conducted, and he also did indicate that he had removed the blocks from the floor as well and replaced the flooring material. I thought I recalled that it was concrete that they put in there, but Jim said that he thought it may have been fire brick as well.

DR. NETON: Well, the fire brick was used to replace the deteriorated blocks. So when they took out the wood -- I can't speak to what it was -- I think I did recall concrete.

DR. POSTON: But in the clean up there's no records of anything of surveys of the wooden floor or anything?

DR. NETON: Oh, yeah.

MR. ROLFES: In the H&K Ferguson Report at the end there is some information regarding the decontamination proceedings that were conducted after the uranium machining operation after it ended on October 7th, 1948.

DR. POSTON: They went all the way, they took all of that out and went all the way to a concrete floor? Is that what they did?

MR. ROLFES: I'm not certain. Let me take a look here.

DR. ROESSLER: But the fire bricks were part of the original building. Is that what you're saying? Was it fire bricks and then wood floor on top of it? Or, no, the wood floor when it deteriorated was replaced by fire brick. During what time period was that? Was that in the operational period?

DR. NETON: I believe so, yes. Because I think Ray Foley was telling me that there were gaps in the floors. By the time they got there in 1992 the floor was pretty

deteriorated, and there were bricks put in where the floor had deteriorated.

DR. POSTON: Oh, so the floor was still there when they got there.

DR. NETON: I believe it was in ’92, yes.

DR. POSTON: Because Mike raised a very good point.

DR. NETON: Yeah, because he told me, clearly he told me that there was a wood floor. So the only way he would have known that is he got there in ’92. Now, I don’t know whether Bechtel took out that entire wood floor. I think it might be in the certification docket, but I didn’t read it in that detail.

DR. POSTON: I don’t have any, I didn’t see anything about it either. That would have certainly given some information.

DR. NETON: We don’t know what type of information.

DR. POSTON: Well, Mike was saying that you never knew what was down in the cracks between the blocks. And sometimes the stuff would come up and --

MR. GIBSON: Actually absorbed in the

blocks.

DR. POSTON: -- in the blocks. And if there was enriched uranium of any sort it ought to be, could be in those blocks. But I was just wondering what they did with them.

DR. NETON: Oh, the blocks. They're probably shipped already, buried them somewhere. I can look through the certification report docket and see if they talk about disposal. They pretty much tore down the whole building I thought. I don't think they would have left the wooden blocks --

DR. POSTON: My thought, my logic is -- if there is such a thing, and please don't answer that question -- but my logic is, okay, we have this sample which is at the loading dock, but it's outside of this area that we're concerned about. But there is this wooden floor and Mike has said, okay, we have a history of stuff going into the wood and going between the woods and so forth, and if it's natural uranium, then, and it could be in those blocks.

So we could verify one, it's either

natural uranium or it's slightly enriched uranium simply by looking at the contamination on those blocks. But we don't even know where they went and so forth. Nobody analyzed them as far as we know.

DR. MAURO (by Telephone): John, this is John Mauro. I'm looking at our report. There was a [Personal Identifier redacted] that was interviewed as part of the work that NIOSH did in terms of compiling all the records. And I'm reading his case here. He was a person that spent time at the site in the 1940s, and he states that when all work was completed at the end of 1948, the equipment and machinery used in the program were removed along with the wood blocks. So apparently there was quite a bit of decontamination took place in 1948 after the completion of the machining operation. And that included removal of the wood block floors.

DR. NETON: Excuse me, John, but Mark Rolfes just gave me an except here out of the H.K. Ferguson report that talks about large-scale incineration of lumber, rags, oil-soaked material. They put a big pan out there and

burned all this stuff.

MR. GRIFFON: But you said Ray Foley remembers the wood floor as being there still, later.

MR. ROLFES: Yeah, they did put down --

MR. GRIFFON: It sounds like at least they removed some of it.

MR. ROLFES: The H&K Ferguson Report does go on to say that after the floor was cleaned, they did put down -- let me get the exact sentence here. They did put down new blocks in some areas, three inch --

DR. POSTON: So we don't have any, so that might --

MR. GRIFFON: The originals are gone, yeah.

DR. POSTON: -- I was hoping that would provide some evidence.

RECOMMENDATION TO THE ABRWH

Well, folks, I'm at a loss as to what to do right now. If we do get the information from Foley then we could have a telephone conference and try to work this out. We're down to if it's not statistically significant, then I think we've already agreed what our path is. If it is statistically significant,

then we need to think pretty hard about what we're going to recommend.

MR. GRIFFON: Well, and then we have those few other actions to follow up at the same time, right?

DR. POSTON: Right, so if we could get all those or have something as soon as we hear from Mr. Foley. When is our next meeting? It's not until the end of June, isn't it?

DR. BRANCHE: Yes, we have a conference call on the 14th, and actually Chapman Valve is on. Dr. Ziemer wanted to hear your progress.

DR. POSTON: Well, that should take about ten seconds.

DR. BRANCHE: But I think the members, the representatives for the members of Congress are going to be alerted because it's a specific item on a brief telephone, I mean it's a fairly brief agenda.

DR. POSTON: So I don't know what else to do. I mean, there's no path forward here until we have the answers to those questions.

MR. GRIFFON: Yeah, I think those actions are --

DR. POSTON: I'm sitting here counting my

tax dollars at work because it took a lot to bring everybody together, and I apologize for that.

DR. BRANCHE: Well, I think a face-to-face meeting after having had the decisions. As you said in our meeting in the early part of April, you all hadn't met face-to-face or by phone since you got the information from DOE, and now you have some better indication. You have some assignments, and being able to schedule a follow-up conference call or meeting --

DR. POSTON: Well, today's the first, so we actually have two weeks before the conference call, right?

DR. BRANCHE: About ten days.

DR. POSTON: I thought you said the 14th.

DR. BRANCHE: It is the 14th. I'm thinking business days. And our Board meeting begins on the 24th of June.

MR. GRIFFON: You might want to, I don't know if you're getting ready to close. I don't know if anyone on the phone has comments.

DR. POSTON: Is there anything else that we

need to talk about?

DR. NETON: The three things that we're following up on are the Y-12 shipping records from DOE. Mark raised this issue about looking at naval operations. I'm not sure where we would start with that.

MR. ELLIOTT: Even if we could, even if we tried something as straightforward as a Google, it's not going to be productive. We take a more active action like approach DOD. You all could be sitting here next year waiting for us to find something out. They don't have to give us anything. There's no leverage for us to use for this law that would force them to give us.

DR. POSTON: Well, the issue is really not the '48, '49 period; it's subsequent periods, right?

MR. GRIFFON: Yeah, it could be. Anything that explains that sample basically is what we're looking for.

MR. ROLFES: Information, we do have some information, limited information. It's from a newspaper article regarding some work that was done. Chapman Valve did produce some canned-

type valves for naval nuclear propulsion applications in the ‘50s which was 1957. They also did -- let me take a look here -- this was related to the Nautilus, the first submarine that was produced for the Navy. It says they had produced, the valves were of the canned-type utilized in a completely enclosed operation. Westinghouse’s Atomic Power Division was not affected by the strike. Also built a reactor for Nautilus -- it goes on. If you’d like a copy of this, I believe it is on the O drive already. But it does discuss that they did produce a non-radioactive valve for the Navy.

MR. GRIFFON: I know, when was that dated?

MR. ROLFES: This was from 1957. It was March 13th, well, 1956. I take that back. It mentioned 1957 in here. That was the Navy’s plans for submarines in 1957, and it discussed their fiscal budget in 1957.

DR. BRANCHE: And then the third follow-up item is the --

DR. NETON: Foley Report.

DR. BRANCHE: -- the Foley Report.

DR. NETON: I hope we can get something in

the next week or so. I mean, they're either there or they're not, I mean, the records.

DR. BRANCHE: Will it come in a form that you can either, that you can use e-mail to get it to the work group members?

DR. NETON: Yes.

DR. POSTON: So the goal would be then to on the 14th discuss this or make a report.

DR. BRANCHE: Make a report on the 14th. Even if you have to schedule a meeting of the work group after that to discuss this further.

DR. POSTON: Mark, anything else?

MR. GRIFFON: I think those three cover it.

DR. POSTON: Gen?

DR. ROESSLER: (no audible response)

DR. POSTON: Michael?

MR. GIBSON: Maybe one more little thing here. I just asked Mark, I guess these valves and stuff, their inception was originally somewhat classified so if that's being the case, there wouldn't necessarily be commercial shipping invoices and everything else for these valves if they did, in fact, come back to the site.

DOE probably used DOE couriers. So I

don’t know if that would have, those kind of records even exist or if they would have even showed up in the types of searches that DOE did.

MR. ROLFES: If the materials were classified, it’s very likely that they would be more carefully documented in order to prevent the loss of that material or equipment. So whether they still exist today if there were, in fact, shipments, that’s, I couldn’t comment on that.

MR. GIBSON: I mean, but a lot of critical components, well, some critical components, were shipped back to the site where they were built and dismantled to check the reliability, et cetera, and there was no procedures allowed to be generated. This all had to be done from memory.

DR. POSTON: Let me make sure I understand what you’re saying. Courier, you’re talking about DOE personnel themselves or, again, relying on Arjun to correct me, they were very adamant about rail transport coming in on rails right beside the facility. And that was my recollection.

DR. BRANCHE: That was described at the Naperville meeting.

DR. POSTON: And that is a good point. Maybe that some of the records were not available because shipping the valves one way --

MR. ELLIOTT: Well, what questions do you want us to ask DOE? Because now I hear your point, Mike, and I want to make sure that we ask the right questions of DOE to verify, validate as best we can from their response that they turned over every stone or thought about their searching for information with these kinds of thoughts in mind.

MR. GIBSON: Well, I guess just that a lot of the required DOE activities for different items, different sites was not necessarily printed in black and white on a contractual agreement between them and the contractor. Somehow it could have been stated in there and some wording that didn’t make it clear to the public what was going on, but would those type of situations, documents, would DOE have pulled those up or found them or references to them in the search that they have conducted?

MR. ELLIOTT: Would their search include secure, restricted data information.

MR. GIBSON: Based on this little blip that came up yesterday via e-mail, I don't know if they'd tell you anyway, but --

MR. CLAWSON (by Telephone): But, Mike, what Larry is saying is true. We need to look at the classified data because I agree with you. Up until about two or three years ago, we still used certified couriers for the paperwork. Now the shipments were done on normal transports, but it was just understood what was classified. You know, a lot of the stuff wasn't opened up.

As a matter of fact, I get shipments today that are classified material on public carriers. They're just locked up boxes. So when Larry goes to DOE to ask this, we need to look at the sensitive, classified information of any kind of shipments or so forth on this.

MR. ELLIOTT: And I presume they've done that, but --

DR. NETON: I guess I'm at a loss as to why they would be classified since we have the original contract with all the specifications

and all the engineering drawings for all the valves that they made. Why, all of a sudden then when they became contaminated, they would have been secret classified and shipped back separately. I mean, we've got shipping paperwork here for virtually everything. It seems to be the substantial bulk of what they produced.

MR. GIBSON: I'm just raising the possibility.

MR. CLAWSON (by Telephone): Oh, and Jim, I agree with you 100 percent, but you know what? There's a lot of stuff out there that I don't understand why they classified it or whatever. But they may have. If they were contaminated, and they didn't want people to know outside the area what they were really working with or different isotopes or so forth like that, there's a lot of things that have been classified that in my mind's eye I don't see why they were. But guess what? DOE has done a lot of that. And I just want to make sure that we're checking every avenue that we've got.

MR. ELLIOTT: Well, Mr. Chairman, I'm asking

Jim to craft this e-mail to send to Pat Worthington in my absence. And I want to make sure that he includes the questions this working group wants answered to verify, I want him to reference the letter that he's speaking from that Pat sent to the Board, and ask these pointed, pertinent questions that the working group has.

I don't want, right now, I don't want to be the one to frame those. I don't think Jim should be the one to frame those. Please, if you will, frame the questions you want us to ask. Besides we've got to do something until the food arrives anyway.

DR. NETON: I think I've got that captured here.

DR. POSTON: Well, what I was going to suggest is if you think you've got it captured, then why don't you draft it and send it to us an e-mail, and we'll send it right back to you.

MR. ELLIOTT: This falls back in your court.

DR. BRANCHE: I would suggest that it --

DR. NETON: Why don't you guys craft what you want us to ask --

DR. POSTON: And then we can do that.

DR. BRANCHE: Yeah, that might be the better thing.

MR. ELLIOTT: I don't want to put words in your mouth.

DR. POSTON: Let's not do it in session. Let's proceed on, and we'll decide what it is --

MR. GRIFFON: It's hard to --

DR. POSTON: -- and then the four of us will get together, and we'll write some sentences and put --

DR. BRANCHE: Or you could assign one person to come up with a first draft.

DR. POSTON: Well, I think we just, the four of us need to put our heads together and decide what it is we want from them.

DR. NETON: Then there'll be no --

DR. POSTON: And I'll take responsibility to get you something ASAP, hopefully before we leave.

Brad, do you have anything else?

MR. CLAWSON (by Telephone): No, that's it.

DR. POSTON: Any comments from anyone else on the speakerphone?

(no response)

DR. POSTON: How about anybody else here?

(no response)

DR. POSTON: Well then, I think we'll adjourn.

DR. BRANCHE: I'm going to close out the line then.

(Whereupon, the working group meeting concluded at 11:51 a.m.)

CERTIFICATE OF COURT REPORTER

STATE OF GEORGIA

COUNTY OF FULTON

I, Steven Ray Green, Certified Merit Court Reporter, do hereby certify that I reported the above and foregoing on the day of May 1, 2008; and it is a true and accurate transcript of the testimony captioned herein.

I further certify that I am neither kin nor counsel to any of the parties herein, nor have any interest in the cause named herein.

WITNESS my hand and official seal this the 4th day of Dec., 2008.

_____

STEVEN RAY GREEN, CCR, CVR-CM, PNSC

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