

**RESTORATION ADVISORY BOARD**

**Martinez, California**

**Meeting of January 5, 2004**

**Reporter's Transcript**

**NICCOLI REPORTING**

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6 **NAVAL WEAPONS STATION**  
7 **SEAL BEACH DETACHMENT CONCORD**  
8 **RESTORATION ADVISORY BOARD**  
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12 **REPORTER'S TRANSCRIPT OF MEETING**  
13 **January 5, 2004**  
14  
15 **Martinez Sheriff's Station**  
16 **1980 Blair Road**  
17 **Martinez, California**  
18  
19  
20 **Reported by Janine P. Gamble, RPR, C.S.R. No. 10372**  
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25 **CERTIFIED SHORTHAND REPORTERS SERVING THE BAY AREA**

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1 **OTHER ATTENDEES**  
2  
3 **HARRY BYRNE** - Concord resident  
4 **JOANNA CANEPA** - Tetra Tech Em Inc.  
5 **DAVID COOPER** - U.S. Environmental Protection Agency  
6 (EPA)  
7 **STACEY GALIK** - ERG  
8 **GREG GLASER** - Concord resident  
9 **CAROLYN HUNTER** - Tetra Tech EM Inc.  
10 **LIBBY LEVY** - Agency for Toxic Substances and Disease  
11 (ATSDR)  
12 Registry  
13 **DAVID McCONAUGHY** - Navy Environmental Health Center  
14 **DEAN McLEOD** - CNWLRA  
15 **GREGG SMITH** - United States Navy  
16 **AIMEE TREFILLETTI** - Agency for Toxic Substances and  
17 (ATSDR)  
18 Disease Registry  
19 **STEPHEN F. TYAHLA** - Department of the Navy  
20 **JERRY WICKHAM** - Tetra Tech EM Inc.  
21  
22 ---o0o---  
23  
24  
25

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1 **PARTICIPANTS**  
2  
3 **COCHAIRS: MARGARET WALLERSTEIN** - United States Navy  
4 **MARY LOUISE WILLIAMS** - Concord resident  
5  
6 **RAB MEMBERS:**  
7 **CHRISTOPHER BOYER** - Martinez resident  
8 **DAVID L. GRIFFITH** - City of Concord representative  
9 **ED McGEE** - Martinez resident  
10 **LAURENT MEILLIER** - San Francisco Bay Regional Water  
11 (SFBRWQCB)  
12 Quality Control Board  
13 **MARIO MENESINI** - Walnut Creek resident  
14 **RAY O'BRIEN** - Bay Point resident  
15 **JIM PINASCO** - Department of Toxic Substances Control  
16 (DTSC)  
17 **PHILLIP RAMSEY** - U.S. Environmental Protection Agency  
18 (EPA)  
19 **IGOR O. SKAREDOFF** - Martinez resident  
20  
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22  
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1 **MARTINEZ, CALIFORNIA, MONDAY, JANUARY 5, 2004**  
2 **6:33 P.M.**  
3  
4 ---o0o---  
5 **MS. WILLIAMS:** Okay. Good evening. I'd like  
6 to start the January 5th, 2004 Restoration Advisory  
7 Board meeting of the Concord Naval Weapons Station.  
8 Are there any intro- --  
9 We're going to do the introductions first,  
10 according to the agenda. And I'll start with myself,  
11 Mary Lou Williams, the community cochair.  
12 **MS. WALLERSTEIN:** I'm Margaret Wallerstein,  
13 Navy cochair.  
14 **MR. PINASCO:** Jim Pinasco, Department of Toxic  
15 Substances Control.  
16 **MR. MCGEE:** I'm Ed McGee, Martinez resident.  
17 **MR. TYAHLA:** Steve Tyahla, Lead Remedial  
18 Project Manager for the Navy.  
19 **MS. WALLERSTEIN:** Why don't we go with our  
20 ATSDR guests.  
21 **MS. TREFILLETTI:** Oh, Aimee Trefilletti, ATSDR  
22 in Atlanta.  
23 **MS. LEVY:** Libby Levy, ATSDR in the  
24 San Francisco office.  
25 **MR. SKAREDOFF:** Could you tell me what those  
initials mean?

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1 MS. TREFILLETTI: Oh, I'm sorry. Agency for  
2 Toxic Substances and Disease Registry. We're part of  
3 the Centers for Disease Control and Prevention in  
4 Atlanta.  
5 MR. SKAREDOFF: Welcome.  
6 MS. GALIK: I'm Stacey Galik. I'm with ERG,  
7 and we consult with ATSDR.  
8 MR. McLEOD: I'm just a resident. Should I be  
9 back there?  
10 MR. COOPER: No. You're fine. Go ahead and  
11 introduce yourself.  
12 MR. McLEOD: I'm Dean McLeod.  
13 MR. COOPER: I'm David Cooper, U.S. EPA.  
14 MR. O'BRIEN: I'm Ray O'Brien, Bay Point  
15 resident.  
16 MR. RAMSEY: Good evening. I'm Phillip Ramsey  
17 with the United States Environmental Protection Agency.  
18 MR. SMITH: And I'm Gregg Smith, the Public  
19 Affairs Officer for the Naval Weapons Station.  
20 MR. SKAREDOFF: I'm Igor Skaredoff, Martinez  
21 resident.  
22 MR. BOYER: Chris Boyer, Martinez resident.  
23 MS. CANEPA: I'm Joanna Canepa. I'm with Tetra  
24 Tech, which provides technical support for the Navy.  
25 MS. HUNTER: Carolyn Hunter, Tetra Tech.

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1 MS. WALLERSTEIN: And the people in the back.  
2 MR. BYRNE: I'm Harry Byrne, Concord resident.  
3 MR. GLASER: Greg Glaser, Concord resident.  
4 MR. WICKHAM: I'm Jerry Wickham with Tetra  
5 Tech.  
6 MR. McCONAUGHY: I'm David McConaughy with the  
7 Navy Environmental Health Center.  
8 MS. WILLIAMS: Is there any public comment?  
9 This is just strictly for members of the  
10 public.  
11 MR. GLASER: Yeah, sure. I -- I plan to join  
12 the RAB for next month, hopefully, if the RAB will take  
13 me. I'm interested in joining. I think I have a lot to  
14 offer.  
15 MS. WILLIAMS: Do you have an application  
16 blank, or do we need to --  
17 MR. GLASER: Yeah; it's all filled out.  
18 MS. WILLIAMS: Okay. Well, we'll be happy to  
19 take it.  
20 MR. GLASER: Great.  
21 MS. WALLERSTEIN: Okay. I'll talk to you after  
22 the meeting.  
23 MS. WILLIAMS: The agenda approval, does  
24 anybody have any additions, corrections, or comments?  
25 I don't see anybody.

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1 MS. WALLERSTEIN: All right. Well, I guess  
2 that brings us to the next item, approval of the  
3 November 3rd meeting transcript.  
4 Does anybody have any questions or comments on  
5 it?  
6 THE BOARD: (No audible response elicited.)  
7 MS. WALLERSTEIN: Okay. Do we have a motion to  
8 approve it?  
9 Igor, and Chris Boyer second?  
10 MR. BOYER: I'll second it.  
11 MS. WALLERSTEIN: All those in favor?  
12 THE BOARD: Aye.  
13 MS. WALLERSTEIN: Opposed?  
14 THE BOARD: (No audible response elicited.)  
15 MS. WALLERSTEIN: Motion carried.  
16 Well, I guess review unresolved business and  
17 the bylaws change r-e the court reporter requirement.  
18 I had sent out to every- --  
19 Well, we had discussed this at the last meeting  
20 about going from having a transcript made to just  
21 having -- to having detailed minutes prepared by Tetra  
22 Tech. So -- and I E-mailed out to everybody a proposed  
23 change, and I got comments back. There were no changes  
24 to the proposed wording.  
25 So, does everybody have a copy of the proposed

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1 change, everybody on the RAB?  
2 Okay. Well, I guess the first thing that we  
3 need to do is I need to have a motion for the RAB to  
4 appoint the total RAB membership as an ad hoc committee  
5 for the bylaws review.  
6 So, do I have that motion?  
7 MR. BOYER: Chris Boyer makes a motion.  
8 MS. WILLIAMS: I'll second that, if I can.  
9 MS. WALLERSTEIN: Okay. All those in favor of  
10 forming the committee?  
11 BOARD MEMBERS: Aye.  
12 MS. WALLERSTEIN: Opposed?  
13 MR. O'BRIEN: Opposed.  
14 MS. WALLERSTEIN: Okay. I guess motion  
15 carried.  
16 I guess since we're now meeting as the ad hoc  
17 committee, if anybody has any proposed changes to the  
18 wording of the amendment or is ready for discussion.  
19 Okay. Do I have a motion for -- that the  
20 committee will accept the -- the bylaws amendment as  
21 written?  
22 MR. BOYER: Chris Boyer will make the motion.  
23 MS. WALLERSTEIN: Will you second?  
24 MS. WILLIAMS: May I?  
25 I'll second it so we can discuss it.

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1 MS. WALLERSTEIN: Okay. All those in favor?  
 2 BOARD MEMBERS: Aye.  
 3 MS. WALLERSTEIN: Opposed?  
 4 MR. O'BRIEN: Opposed.  
 5 MS. WALLERSTEIN: Okay. Ray O'Brien is  
 6 opposed.  
 7 Now, this has to come to --  
 8 I guess now this gets presented to the chair.  
 9 I'll be the chair. Well, it gets presented to the  
 10 chairs. The next step then is to agendize it for the  
 11 next meeting for an actual vote. So --  
 12 MR. COOPER: Can I ask just a process question?  
 13 MS. WALLERSTEIN: Yeah.  
 14 MR. COOPER: Is this the point at which the --  
 15 the -- it should be discussed how it will be, or are you  
 16 just bringing it to a vote next time, and you're going  
 17 to discuss it then?  
 18 MS. WALLERSTEIN: Well, the RAB --  
 19 I was just reviewing to refresh my memory. We  
 20 will now vote on a change, but the final vote would be  
 21 next -- at the next meeting.  
 22 MR. O'BRIEN: But I think the question he's  
 23 asking is, is there -- there a discussion regarding this  
 24 item now or at the next meeting?  
 25 MR. COOPER: We have a person who has opposed

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1 MR. O'BRIEN: I would like to move that the  
 2 discussion be at the next meeting prior to that vote.  
 3 MS. WALLERSTEIN: Oh, you don't want to discuss  
 4 it this meeting?  
 5 MR. O'BRIEN: I do not, no.  
 6 MS. WALLERSTEIN: Okay. Well --  
 7 MR. SKAREDOFF: I'm sorry. I'm starting to get  
 8 more confused now.  
 9 MS. WALLERSTEIN: I know.  
 10 MR. SKAREDOFF: We voted to form an ad hoc  
 11 committee to review the changes.  
 12 MS. WALLERSTEIN: Yeah.  
 13 MR. SKAREDOFF: And then -- so, that was one of  
 14 our votes. And the second vote was to --  
 15 MR. BOYER: The ad hoc committee accepting the  
 16 changes and presenting them to the RAB overall at the  
 17 next meeting.  
 18 Yes?  
 19 MS. WALLERSTEIN: We formed an ad hoc  
 20 committee, we had to vote to do that, and then we had a  
 21 vote to accept the changes.  
 22 MR. SKAREDOFF: In this particular case the ad  
 23 hoc committee and the RAB at large are the same group of  
 24 people?  
 25 MS. WALLERSTEIN: Yeah, yeah.

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1 the motion. I didn't hear any discussion, and I just  
 2 wondered where the discussion piece falls in, if it's  
 3 this meeting or next meeting when you do the final vote.  
 4 MS. WALLERSTEIN: No; we can discuss it now.  
 5 We could have even discussed it in the ad hoc committee,  
 6 but there was no discussion. But we can discuss it now  
 7 because the RAB needs to vote whether or not to accept  
 8 the bylaws, and then it has to be -- have a final vote  
 9 no more than 14 -- no sooner than 14 days later, so that  
 10 would be the next meeting.  
 11 MR. COOPER: Okay.  
 12 MS. WALLERSTEIN: So, do I have a motion?  
 13 MR. O'BRIEN: Point of information, why are  
 14 there two votes?  
 15 MS. WALLERSTEIN: It's what the bylaws require.  
 16 MS. WILLIAMS: We're voting --  
 17 We voted to form an ad hoc committee, which was  
 18 the first vote.  
 19 MR. O'BRIEN: Oh, okay. So the first vote has  
 20 taken place.  
 21 MS. WILLIAMS: Yeah.  
 22 MR. O'BRIEN: This next vote will be at the  
 23 next meeting?  
 24 MS. WILLIAMS: To accept -- to accept or -- or  
 25 not the bylaws change.

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1 MR. COOPER: I guess what I missed, and maybe I  
 2 just zoned out for a minute, was it seemed like if the  
 3 ad hoc committee, which is now the committee of the  
 4 whole, was going to accept the changes in the second  
 5 vote, that there should have been a discussion before  
 6 you had that vote. And I think you said there was no  
 7 discussion, but I don't remember a discussion being  
 8 called.  
 9 MS. WALLERSTEIN: I asked for discussion, did I  
 10 not, from the ad hoc committee?  
 11 MR. COOPER: I don't think it registered.  
 12 Apparently it didn't register.  
 13 MS. WALLERSTEIN: All right. Well, then my  
 14 apologies. Maybe I went too fast, or maybe it was too  
 15 quiet.  
 16 MR. COOPER: I think it's germane because of  
 17 what Ray has brought up. It seems to me in the way  
 18 you're describing the process that prior to having that  
 19 second vote that you already had that would have been  
 20 the appropriate time.  
 21 MS. WALLERSTEIN: Maybe I just didn't say it  
 22 loudly enough, and apparently some people missed it. We  
 23 can open the discussion.  
 24 MR. COOPER: But Ray still has a motion that  
 25 he's made to -- to have the discussion next time. I

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1 don't care either way so long as everyone is clear about  
2 how this is going to proceed so that everyone who needs  
3 to speak to it can speak to it at some point where it's  
4 still relevant. That's my only point.

5 MS. WALLERSTEIN: Okay. Well, we can discuss  
6 it. We need a vote that the RAB has, you know,  
7 accepted -- I guess accepted the changes and will vote  
8 to consider them at the next meeting.

9 MS. WILLIAMS: Or have the discussion.

10 MS. WALLERSTEIN: There is a lot of votes.

11 MR. SKAREDOFF: So the first vote was basically  
12 to pass it along to the whole RAB to decide whether they  
13 want to accept it or not?

14 MR. SMITH: That was the second vote. The  
15 first vote was to form the ad hoc committee. The second  
16 vote was for the ad hoc committee forwarding everything  
17 to the RAB for a final decision.

18 Is that correct?

19 MR. SKAREDOFF: So the next meeting is going to  
20 be --

21 MS. WALLERSTEIN: The RAB --

22 MR. SKAREDOFF: The RAB will --

23 Okay. As of right now no decision has been  
24 made except to put the changes in front of the whole  
25 RAB.

1 at some point?

2 MS. WALLERSTEIN: Opposed? I'm sorry.

3 MR. O'BRIEN: Well, I had a motion, but if I'm  
4 understanding you correctly, then, the discussion will  
5 be at the next meeting --

6 MS. WALLERSTEIN: Right.

7 MR. O'BRIEN: -- of this issue.

8 MS. WALLERSTEIN: Yes.

9 We can discuss it now.

10 MR. O'BRIEN: No, I would prefer to wait until  
11 the next meeting to discuss it.

12 MS. WALLERSTEIN: Okay.

13 MR. O'BRIEN: Okay.

14 MR. SKAREDOFF: Do you need a second for your  
15 motion, Ray? I'll second it.

16 MR. O'BRIEN: I don't think we need to.

17 MR. COOPER: I just wanted to make sure that  
18 you were okay with the process.

19 I guess he's okay.

20 MS. WALLERSTEIN: Well, we had a motion. We  
21 had a second. Okay.

22 MR. O'BRIEN: I'm okay with the process but --

23 MS. WALLERSTEIN: We won't discuss it right  
24 now, but we will have room to discuss it at the next  
25 meeting.

1 Is that correct?

2 MS. WALLERSTEIN: Yeah. And the RAB now has to  
3 vote that they will consider the changes that have been  
4 put before them by the ad hoc committee.

5 MR. SMITH: So the next vote is just saying --  
6 is the RAB basically accepting the changes and saying  
7 thank you, we'll have a look at this.

8 MS. WALLERSTEIN: Yes. And then we will  
9 discuss it and have a final vote at the next meeting.

10 MR. SKAREDOFF: Okay. So, that's the vote that  
11 actually decides whether we adopt the changes or not?

12 MS. WALLERSTEIN: Right.

13 MR. SKAREDOFF: All of these are just kind of  
14 steps along the way?

15 MR. SMITH: They're just procedural.

16 MS. WALLERSTEIN: Right.

17 So, as the Navy cochair I move that the RAB  
18 accept the changes for consideration -- the changes to  
19 the bylaws for consideration at the next meeting.

20 MS. WILLIAMS: I'll second that. I'll do that.

21 MS. WALLERSTEIN: All those in favor?

22 THE BOARD: Aye.

23 MS. WILLIAMS: So we're going to discuss it  
24 next meeting.

25 MR. COOPER: Didn't you have a motion out there

1 MR. O'BRIEN: Okay. Great.

2 MS. WALLERSTEIN: Okay. All those in favor?

3 THE BOARD: Aye.

4 MS. WALLERSTEIN: Opposed.

5 THE BOARD: (No audible response elicited.)

6 MS. WALLERSTEIN: Okay. Motion carried.

7 On to the next agenda item. Okay. We're  
8 ahead.

9 We have the RAB training session tonight, fate  
10 and transport, presented by Jerry Wickham with Tetra  
11 Tech.

12 Mr. Wickham.

13 This is the fate and transport training, and  
14 this session will wrap up the current training series  
15 for the RAB.

16 MR. WICKHAM: Thank you.

17 Welcome. My name is Jerry Wickham, and I'm  
18 with Tetra Tech. And I'm here to present the training  
19 on behalf of the U.S. Department of Navy and in  
20 consultation with California Department of Toxic  
21 Substances Control, California Regional Water Quality  
22 Control Board, training session on contaminant fate and  
23 transport.

24 The purpose of today's presentation is to  
25 provide an overview of contaminant fate and transport.

1 In reviewing that we'll be looking at what happens to  
2 chemicals after they're released in the environment,  
3 we'll also look at changes that a chemical may undergo  
4 after that release, and how the surface and subsurface  
5 conditions at a site can affect the distribution and the  
6 final form the contaminant will have in the environment.  
7 Last September the RAB had a training session  
8 on human health risk assessment and ecological risk  
9 assessment, and there was also a training session on  
10 toxicology given by Dr. Dan Stralka of the U.S. EPA at  
11 the October 6 RAB meeting.  
12 The human health risk assessment and the  
13 ecological risk assessment occur as part of the remedial  
14 investigation stage. The contaminant fate and  
15 transport, the way that fits in, it's something that you  
16 need to consider prior to doing your human health risk  
17 assessment and ecological risk assessment.  
18 The fate and transport tells you what -- the  
19 information that you're going to need to put together a  
20 site conceptual model, what type of contaminant -- what  
21 your contaminant sources are, what your potential  
22 pathways are, and, therefore, what are your -- what are  
23 your potential receptors. And those, in fact, are the  
24 items that you would be considering in the human health  
25 and ecological risk assessments.

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1 In order for there to be a threat to human  
2 health or the environment there needs to be a viable  
3 pathway to the -- to reach the receptor. So, therefore,  
4 in today's session we're really taking a step back from  
5 that risk assessment, considering information that we  
6 would need as input to those risk assessments.  
7 Fate and transport, in order to provide an  
8 overview, it's a very broad topic. It has a wide range  
9 of media mechanisms that occur both in the surface and  
10 subsurface.  
11 Surface media affected. By this we mean the  
12 air, surface water, surface soil and sediment, biota, as  
13 examples.  
14 Each of these media that are affected will have  
15 a number of processes that are going to be active and  
16 that need to be considered. It's a very complicated  
17 topic. Each of those processes in and of themselves  
18 could be a subject of a training session if we wanted to  
19 look at it in detail to consider all the factors and  
20 variables that can go into it. But our objective today  
21 is really to get a broad overview of contaminant fate  
22 and transport that you may be considering at a site.  
23 In order to help illustrate, organize this in a  
24 manner that may be useful to you, we're trying to use  
25 some site examples from the Concord Naval Weapons

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1 Station.  
2 So when we consider the surface media, that is  
3 ground surface, we're going to be looking, as an  
4 example, at metals in the surface soil and sediment at  
5 the Litigation Area, just to use that as an example in  
6 which to look at the fate and transport processes.  
7 For subsurface media we look at VOCs -- VOC  
8 stands for Volatile Organic Compound -- in the  
9 subsurface soil and groundwater. We'll look at that at  
10 Solid Waste Management Units 2, 5, 7, and 18 in the  
11 Inland Area.  
12 So here's the Litigation Area, and here's the  
13 Solid Waste Management Units in the Inland Area  
14 (indicating).  
15 My objective today is not to review the site  
16 history there or to look at the chemical results from  
17 those areas, but really just to use those as examples to  
18 talk about fate and transport processes.  
19 So here's the Litigation Area examples of the  
20 fate and transport process. These are the primary  
21 processes we're going to be looking at in the surface  
22 soil.  
23 First of all we talk about the physical  
24 processes that can take place at land surface. And  
25 these are processes such as wind erosion, which can pick

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1 up physical particles. So this is a fairly simple  
2 process to consider. The wind energy comes along, can  
3 pick up particles of a certain grain size, bring them  
4 airborne, and then redistribute them in a downwind  
5 direction.  
6 This can occur with both metals particles and  
7 metals that are both absorbed to soil particles. So  
8 they can both be picked up and moved.  
9 Surface runoff is water from precipitation  
10 moving across the soil surface. Physically, again, it  
11 picks up the particle -- metals particles and soil with  
12 absorbed metals, metals stuck to the soil, picks them  
13 up, carries them into drainage ways or ditches,  
14 therefore, then they're transported again by physical  
15 processes into larger drainage ways, and they can leach  
16 further on into larger bodies of water such as the Bay  
17 or wetlands, and they can accumulate sediments within  
18 the water bodies.  
19 There are a lot of processes that can take  
20 place within the wetlands and Bay. There is the  
21 physical redistribution that occur through currents.  
22 There is also a lot of biogeochemical cycling that can  
23 occur. We're not going to talk about that in detail.  
24 It would take quite a bit of time.  
25 In addition to those, we have biotic uptake by

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1 plants or animals that can occur. Contaminants can be  
2 taken up by the plants. The animals can also get  
3 involved in this. Again, that's a fairly typical cycle  
4 that can occur. But, as you can see, really what we  
5 want to know here is it can result in the redistribution  
6 of material from its original area over a broader area.

7 There is several metals that are present at the  
8 Litigation Area. One we're going to use as an example  
9 today would be arsenic in soils.

10 There are other processes that can occur here.  
11 We'll take a look at what can happen to arsenic.  
12 Infiltration and dissolution just means that water  
13 precipitation moves down into the soil. Some of the  
14 metals can be carried downward by -- as being dissolved  
15 into the waters as it moves down. In opposition to this  
16 process is absorption. That is that some of the metals  
17 will be caught on the soil particles.

18 There is a tendency for soil, particularly  
19 soils with iron oxides, to attract and hold metals in  
20 place and so that some will move downward, some of them  
21 will be held by the soils. And this process generally  
22 acts in opposition, will tend to concentrate much of our  
23 metals in the surface soil.

24 The thing to remember about arsenic is that  
25 arsenic is -- can be mobile if it's in the right form.

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1 But the arsenic exists in soil generally in two forms,  
2 first one is Arsenic 3, also sometimes known as  
3 Arsenite, or Arsenic 5, also sometimes known as  
4 Arsonate.

5 Arsenic may or may not be mobile depending on  
6 the form that it takes. Arsenite, or Arsenic 3,  
7 generally is about four to ten times more soluble than  
8 Arsonate and, therefore, will be more mobile. It can be  
9 picked up in dissolution and carried down more readily  
10 than Arsonate.

11 The factors -- and there are many factors that  
12 go into determining whether you -- which form of arsenic  
13 you have and how mobile it's going to be in addition to  
14 just the two types. It can go back and forth from one  
15 type to another.

16 And some of these factors would be -- this is a  
17 list of the factors that are going to be affected. Many  
18 of these are geochemical.

19 Redox potential, this is basically the  
20 oxidation state of the arsonic.

21 Iron oxides, again, this is something that --  
22 another geochemical condition.

23 Soil type, obviously very important.

24 Another geochemical condition of the soil,  
25 carbon content, has to do, again, with organic material

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1 in the soil.

2 All of these are factors which are going to be  
3 determining whether or not you have -- which form of  
4 arsenic you have and how mobile it's going to be.

5 The conclusion would be that mobility is  
6 related to a complex set of conditions in the soil and  
7 that it can vary with individual metals.

8 That's a brief overview for the surface metals  
9 at the Litigation Area.

10 Next I'd like to move on and talk about some of  
11 the subsurface contaminant fate and transport processes.  
12 And for that example we'll look at volatile organic  
13 compounds at Solid Waste Management Units 2, 5, 7, and  
14 18 in the Inland Area.

15 This is a site conceptual model from the  
16 Remedial Investigation Report. For this example we're  
17 going to look at volatile organic compounds discharged  
18 in the steam cleaning area near Building IA-43.

19 Here's a diagram that would show the discharge  
20 and release of volatile organic compounds and water from  
21 the steam cleaning area. So we have a significant  
22 volume of water also discharged. We move from the steam  
23 cleaning area into the soil. As it moves down -- this  
24 is a -- basically, if you're looking at a microscope,  
25 this would be looking at the -- diaphragmatically at the

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1 soil particles. So this would be our soil solids. We  
2 have blue, which would be the water moving down.

3 In addition to that there would be some of the  
4 pure phase -- small volume of the pure phase chemical,  
5 in this case primarily tetrachloroethene and  
6 trichloroethylene, the volatile organic compounds.  
7 There would be a tendency for integral particle forces  
8 to hold up these free phase VOCs. And in addition to  
9 that, again we have absorption, the tendency of the soil  
10 to attract and hold the VOCs in place due to the  
11 attraction of the soil particles for the volatile  
12 organic compound. It's called retardation.

13 Some of the moisture -- some moisture moves  
14 downward, further down into the soil column. The free  
15 phase -- in some sites, not this site necessarily, but  
16 in some sites if the volume of the free phase product  
17 were great enough, it would be able to move down further  
18 into the soil column and actually reach the water table.  
19 That's if it were great enough to overcome the absorbent  
20 capacity of the soil.

21 At this site mostly what we have is -- would be  
22 the water was carried -- some moisture carried down,  
23 some dissolved VOCs, lower end of the soil column. Much  
24 of it was probably absorbed.

25 The other factors that -- the other processes

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1 that would occur in the soil column, we would have  
2 volatilization in which the -- again, looking at the  
3 system, we have soil solids, some moisture, not  
4 saturation, just some soil moisture, and we have air.  
5 And the VOCs can volatilize or move from both of these  
6 phases into the air, into the soil gas.

7 And there is some soil gas sampling that's  
8 being planned at that site. And soil gas will be taking  
9 samples at various places of this soil gas to look at  
10 how much of these VOCs have volatilized into soil gas.

11 Other -- other processes, chemical and  
12 biological transformations that occur due to -- that  
13 affect the chemicals. I'm going to talk a little bit  
14 more about that when we get down to talking about the  
15 groundwater.

16 So at this point we've brought some of the  
17 chemicals down through infiltration and dissolution to  
18 the water table. Once we reach the water table, as you  
19 know, the water table -- the groundwater is going to be  
20 naturally moving from an area of higher pressure to  
21 lower pressure or, for our water table aquifer, from an  
22 area of higher elevation to lower elevation.

23 As the groundwater moves this groundwater that  
24 is -- soil moisture that is infiltrated and brought down  
25 to the volatile organic compounds is going to mix with

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1 the groundwater and is going to be carried in a  
2 downgradient direction, the direction of groundwater  
3 flow. Fancy term for that is affective flow.

4 Again, that's going to be opposed by  
5 absorption, where some of the volatile organic compounds  
6 in the groundwater are going to be attracted to the soil  
7 particles in the aquifer are going to come out. Again,  
8 they're going to be absorbed onto the soil surfaces, the  
9 inner particles.

10 MR. SKAREDOFF: I'm sorry. Would you maybe  
11 just make something clear for me? A couple of steps  
12 back -- I've been trying to write and listen at the same  
13 time, and I'm slower than that -- the step where you  
14 talk about volatilization, the organics -- volatile  
15 organics would go into a vapor state --

16 MR. WICKHAM: Correct.

17 MR. SKAREDOFF: -- and move off into part of  
18 the soil that is not part of this plume.

19 Is that kind of the idea?

20 MR. WICKHAM: Yes. The soil vapor -- it's  
21 basically --

22 Think about the soil gas. It actually has the  
23 tendency to move around also, so there is -- it's not  
24 completely static. So the soil gas actually can be  
25 transported.

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1 So, what -- if you did a soil gas survey right  
2 around this particular source, what you'd find is you'd  
3 find high concentrations here, you'd find lower  
4 concentrations as you moved away. But the soil gas  
5 actually will carry material away from where the release  
6 occurred.

7 Okay. The last process I wanted to talk about,  
8 chemical and biological transformations for volatile  
9 organic compounds. This can be a fairly significant  
10 process, chemical process. Each of the chemicals has a  
11 half life, but that's not necessarily one of the major  
12 factors that's going to remove a large volume of  
13 volatile organic compounds from our plume. Biological  
14 transformations, depending on the conditions, the  
15 chemical conditions in the plume itself, can be  
16 significant.

17 The two are interrelated, the chemical and  
18 biological conditions. The biological conditions can in  
19 turn -- in turn use up the oxygen, affect the chemical  
20 conditions. If the chemical conditions are right, we'll  
21 have certain types of microbes that will grow. The  
22 microbes can effect -- effectively begin to catalyze or  
23 degrade some of the volatile organic compounds in the  
24 plume.

25 If that were to occur in a plume, you would see

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1 a transfor- -- a series of changes in the chemicals.  
2 You could go from tetrachloroethene, which would be  
3 broken down by the microbes to trichloroethylene, which  
4 would then be further broken to 1, 2-dichloroethene, and  
5 then further broken down to vinyl chloride. And then if  
6 you had the right type of microbes, probably another  
7 type of microbes to carry the reaction even further,  
8 then you could move down to ethenes, which would be the  
9 most innocuous.

10 So you can have a whole transformation series  
11 if you have the right microbes and the right  
12 chemical conditions in the aquifer.

13 MR. MENESINI: Pardon me. Would you repeat  
14 that again?

15 MR. WICKHAM: Which part?

16 MR. MENESINI: Just the cycle.

17 MR. WICKHAM: The cycle, tetrachloroethene to  
18 trichloroethylene, to 1, 2-dichloroethene, and then to  
19 vinyl chloride --

20 MR. MENESINI: Okay.

21 MR. WICKHAM: -- and then to ethene.

22 MR. MENESINI: And then to ethene.

23 MR. WICKHAM: Yes.

24 So we're -- basically we're moving  
25 chlorinated -- we're moving to chlorines.

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1 MR. SKAREDOFF: Where does the chlorine go?  
2 MR. RAMSEY: It's a chlorine ion.  
3 MR. WICKHAM: Yeah, we're -- basically we're  
4 reducing it down to smaller and smaller chlorine.  
5 MR. SKAREDOFF: You take off the molecule, and  
6 what happens to it?  
7 MR. RAMSEY: It's still an atom.  
8 MR. SKAREDOFF: Does it attach itself to the  
9 soil, is it an inorganic salt or --  
10 MR. WICKHAM: It's just a chlorine.  
11 MR. SKAREDOFF: It just becomes a chloride ion?  
12 MR. RAMSEY: Chloride ion, yeah.  
13 MR. WICKHAM: Yeah.  
14 MR. SKAREDOFF: Okay. I mean, you're going  
15 from four to three to two to one to zero chlorines on  
16 this molecule. Is that what's basically going on?  
17 MR. WICKHAM: Well, it's talking about --  
18 In the ethenes?  
19 MR. SKAREDOFF: Yeah. I mean, that's the set  
20 of reactions you just described. You start with four  
21 and then end up with none. So all of those chlorines  
22 get taken off molecule eventually given the right type  
23 of conditions; right?  
24 MR. WICKHAM: Yes.  
25 MR. SKAREDOFF: So I guess my question is, what  
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1 form does the chlorine take after -- after it's been  
2 removed? I mean, is it just inorganic chlorate, or  
3 chlorine gas, or what is it?  
4 MR. WICKHAM: I don't know how much goes -- if  
5 it becomes a chlorine gas. I think it's just a chlorine  
6 ion.  
7 MR. SKAREDOFF: So, it just becomes a chloride  
8 ion?  
9 MR. O'BRIEN: So, it's basically harmless.  
10 MR. RAMSEY: There would be chloride ions in  
11 the water so you would really see an increase in  
12 chloride ion concentration.  
13 MR. SKAREDOFF: It doesn't go on to some other  
14 organic molecule? It goes into an inorganic phase?  
15 MR. MEILLIER: It might form HCL, actually,  
16 hydrochloric acid. It might decrease the pH.  
17 MR. SKAREDOFF: Okay. So, it might make  
18 hydrochloric acid which then would probably react with  
19 the basic constituents in the soil, I suppose.  
20 MR. MEILLIER: If you have the -- it's an  
21 environment where you have a lot of protons, that might  
22 decrease the pH of the soil.  
23 MR. RAMSEY: You don't see a change in pH  
24 because this -- it's done at a -- microbes and things  
25 are doing this, and you don't -- I mean, there is other  
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1 ways -- there actually are other daughter products and  
2 other gases and things, I think, as the degradation is  
3 occurring.  
4 MR. SKAREDOFF: Okay. So when that happens is  
5 there sort of a ballpark idea of how long this takes in  
6 a typical situation? I mean, I know there is a lot of  
7 variability. I mean, are we talking weeks, or are we  
8 talking thousands of years, or, you know --  
9 MR. WICKHAM: We're talking --  
10 MR. RAMSEY: It depends on the environment,  
11 actually.  
12 MR. WICKHAM: Basically the other thing you can  
13 do, basically you can speed it up by changing the --  
14 changing the conditions. If the conditions are very  
15 slow, it may take -- yes, it may take years.  
16 MR. RAMSEY: Igor, something, actually, since  
17 we're talking about this issue and natural degradation,  
18 since that's considered -- EPA is considering -- one of  
19 the remedies is monitored natural attenuation. What  
20 we're -- what we've been challenging the Navy, asking  
21 for additional information, is when we look at the SWMUS  
22 sites in particular we don't see a lot of these daughter  
23 products, the breakdown products. We see a lot of PCE,  
24 we see TCE, and that's about it.  
25 So we've actually -- based on that information  
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1 it doesn't indicate for the SWMUS sites in particular,  
2 it's where these volatile organic compounds are in the  
3 groundwater, it appears that this natural process, if  
4 it's happening, it happens very slow because we don't  
5 see the presence of these daughter -- the breakdown  
6 products of the PCE, the perchloroethylene, and  
7 trichloro-, TCE.  
8 So we believe that that may actually be  
9 happening very slow, therefore, in terms of the  
10 Superfund remedy selections that wouldn't be a very good  
11 remedy if it's going to take a hundred years for those  
12 things to break down because the Navy -- as we've  
13 commented in our letters about the RI to date, asked for  
14 a clarification about that. That if it's going to take  
15 a hundred years, the Navy will have to be monitoring  
16 that plume, those wells, until the contaminant  
17 concentrations in the groundwater at that site get down  
18 below drinking water standards.  
19 We would not want to see the Navy have to  
20 monitor that plume for hundreds of years because of just  
21 reuse and uncertainties about what may happen. Somebody  
22 sneaks in there and pops in a groundwater well or, you  
23 know, that kind of worse case --  
24 MR. SKAREDOFF: You're not going to make sure  
25 it happens either.  
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1 MR. RAMSEY: I won't be around. Maybe my  
2 children but. . . .

3 MR. TYAHLA: Well, keep in mind, you know,  
4 we're getting a little ahead of ourselves.

5 MR. SKAREDOFF: Well, I wasn't really trying to  
6 get into that. I was just trying to understand sort of  
7 the sense here because my understanding of this kind of  
8 situation is that it's kind of a race. It's a race  
9 between how fast it gets degraded compared to how fast  
10 it gets moved. So at some point it gets degraded at a  
11 sufficient rate and balances out how much it moves, and  
12 that's how far your plume goes. After that your plume  
13 is okay because by that time, by the time it gets to  
14 wherever it's going, it has broken down.

15 MR. TYAHLA: Yeah. In my experience natural  
16 attenuation really depends on the site conditions you  
17 have, but you can also get in to do things to speed it  
18 up, supplement it, injecting the subsurface. Then you  
19 can be talking weeks. They did TCE destruction over at  
20 Hunters Point, and they're getting results in weeks.  
21 It's something like basically iron helps speed up  
22 things, but there is things you can do.

23 MR. RAMSEY: Well, that's more reactive. The  
24 iron curtains and things are actually reacting --

25 MR. TYAHLA: So, there's definitely some things

1 you can do in situ, you know, chemically or  
2 biologically, and then you go like weeks or months.

3 But natural state, like he was saying, there  
4 is, you know, slow. But other sites where you might  
5 institute in situ flora, microorganisms that are  
6 existing may be faster. But that's why you have to --

7 If you were going to propose doing any kind of  
8 like monitored natural attenuation, you definitely have  
9 to prove that's, first of all, happening, that you're  
10 really seeing your data. That's really the toughest  
11 part of that remedy is to really prove it's happening  
12 and seeing what the rates are.

13 MR. SKAREDOFF: Well, then in this particular  
14 case the degradation products are nobody's favorite  
15 prize anyway. Vinyl chloride is one of the worst things  
16 out there. It's next to the last thing before you get  
17 to ethene.

18 MR. WICKHAM: Right. So you basically have to  
19 be able to see the reaction all the way through.

20 And, again, that's very tricky because it takes  
21 other types of organisms under the right types of  
22 conditions in order to do that unless you want to  
23 augment. Basically you can speed the reactions up by  
24 giving the microbes what they want. The right microbes  
25 and putting them in the right conditions, geochemical

1 conditions, for them to thrive, in which case all of a  
2 sudden you can speed up, as you say, the race.

3 The race is between the source and the factors  
4 that are going to be opposing that and keep the plume  
5 from spreading, and basically you can swing it in one  
6 direction or another.

7 MR. COOPER: There was a question back here.

8 MR. WICKHAM: Yes.

9 MR. McLEOD: This is very helpful in a general  
10 way, but, as he said, it's site specific, and the site  
11 that I know most about is the wetlands site for the  
12 dump, I guess Site 1, is it? And I'm assuming because  
13 of that, the fact that the dump is built on the  
14 wetlands, that there is faster -- this whole process is  
15 speeded up greatly. Is that accurate, No. 1?

16 The other question -- before you answer that  
17 question, I have a more general question. This is  
18 really great, this acronyms list. Is there a good book  
19 you can recommend that would have the definitions of the  
20 word -- of the words and phrases from which the acronyms  
21 are derived?

22 Well, you know, some of you are engineers and  
23 specialists. Most of us are not, general public. Some  
24 of -- I went to college, a lot of those are familiar,  
25 but is there a book that really defines these terms?

1 That would be helpful.

2 But the more specific question is really about  
3 that site. And what makes me think of that is, first of  
4 all, I know more about it, and the other thing I was  
5 read -- I was doing some research, and I was looking at  
6 a 1939 aerial map made by the Navy of the site of the  
7 whole area there, and it shows that -- a slough going  
8 right through the middle of Site 1 before you started  
9 dumping on it. And I'm wondering would not that slough  
10 be a tremendous facilitator for this process?

11 MR. WICKHAM: Yeah, I'm not familiar with the  
12 site specific conditions at Site 1.

13 MR. McLEOD: This is what we're interested in.  
14 I'm interested in. The general stuff's good, but as far  
15 as we're concerned --

16 MR. RAMSEY: What I would just offer to --  
17 without kind of, you know, distracting from Jerry's  
18 presentation, Dean, I'd be happy to talk with you at the  
19 break or something about a couple of these things.

20 We don't see a lot of VOCs. The chemicals that  
21 Jerry is talking about here at the SWMUs sites, the  
22 maintenance areas, we don't see those kind of chemicals  
23 at the Site 1 -- at the wells that surround the Site 1  
24 landfill. And we do not have PCE and TCE. Those are  
25 more chemicals that are -- from a human health risk

1 they're chemicals -- they are a drinking risk, and  
2 they're a volatile debris. If you had a building on top  
3 of those kind of things, that would be a problem.  
4 The eco risks for VOCs are actually a little  
5 different. They're not as significant ecologically.  
6 So, it's more of a human health risk, the VOCs are, in a  
7 very general sense.  
8 I just want to -- if you don't mind, I would be  
9 happy to talk more --  
10 MR. McLEOD: Well, the reason I bring it up, in  
11 the studies I've seen it doesn't look like you've used  
12 those maps, early aerial maps. You've been using maps  
13 from the '70s and the '80s of the land that the dump is  
14 built on, and it's not as -- you're right, it's not  
15 specific to those two sites that he's talking about.  
16 MR. RAMSEY: I'm fully aware -- we're aware of  
17 the channels and things. I am aware of the geology  
18 around there, and I'd be happy to talk with you about  
19 it. Maybe -- in fairness to Jerry, I mean, if the RAB  
20 wants to hear it, I would be happy to elaborate, but if  
21 not, maybe leave it to the --  
22 MR. SKAREDOFF: I guess I would like to offer  
23 maybe we can talk about this after Jerry's moved further  
24 through his process.  
25 I would like to make one point, though, is that  
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1 just because we haven't found the VOCs at the Tidal Area  
2 doesn't mean that there isn't other things or absence.  
3 MR. RAMSEY: And I didn't say there --  
4 MR. SKAREDOFF: I just wanted to make the  
5 point. Yeah.  
6 MR. WICKHAM: Perhaps we can do justice to that  
7 topic. We may want to be prepared to look at  
8 information when we consider that site. I really can't  
9 do it today. Phillip, perhaps, is going to be better at  
10 discussing that.  
11 MR. RAMSEY: Take a stab at it off the cuff,  
12 comments about that.  
13 MR. WICKHAM: Let me just finish up with some  
14 of these processes.  
15 The last process I want to talk about, which is  
16 dispersion. The easiest way to look at that is a  
17 diagram, simple diagram that shows -- basically  
18 dispersion is just the spreading out of a plume as it  
19 moves in a downgradient direction this diagram  
20 illustrates. What actually causes that is that you have  
21 a flow path through a porous media, which would be the  
22 soil particles.  
23 And in some cases the pathway is going to  
24 become more tortuous as you move downgradient, and the  
25 groundwater will move one direction or another around  
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1 the soil particles. This is going to result in the  
2 spreading of the plume as it's downgradient. It's  
3 affected in both horizontal and vertical directions.  
4 Many factors can be affecting subsurface  
5 contaminant fate and transport. Obviously chemical,  
6 obviously very important. An example might be PCBs  
7 which are going to be very viscous, they're highly  
8 absorbed to the surface soil, in opposition to something  
9 like MTBE or chlorate which are not going to be highly  
10 absorbed and are going to be resistant to degradation,  
11 which are going to be very mobile in an aqueous  
12 environment.  
13 The volume and mechanism of the release.  
14 Again, we talked a little bit about free phase. And if  
15 you have enough of that, it can move downward through  
16 the soil column in free phase, and then further down  
17 into groundwater. And if it's more dense than the  
18 groundwater, it can continue to move downward.  
19 Talk a little bit about the mechanism of the  
20 release. If you had a continuous source versus a  
21 decreasing source. Let's say ongoing source, this was  
22 continuously releasing material, again, in this thinking  
23 about it, which is a very good example when you think  
24 about this, you have forces which are pushing the plume  
25 outward, and you have forces which are controlling its  
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1 total size.  
2 If it comes from a continuous source, the plume  
3 is going to continue to move and the -- until finally it  
4 strikes a balance at which the degradation, absorption,  
5 and dispersion are going to be able to effectively  
6 control the size of the plume.  
7 A decreasing source, in other words, it comes  
8 in, the source is moved, no longer active, eventually  
9 these other forces -- these other processes are going to  
10 be acting to reduce the size of the plume.  
11 And an intermittent source which would operate  
12 at various times may look like -- something like that in  
13 the plume (indicating).  
14 And those are all just similar conditions with  
15 just various types of mechanisms of release.  
16 Getting back to the condition, fate and  
17 transport conditions, the factors affecting that,  
18 geology and hydrogeology. One of the most complex.  
19 It's hard to get fully characterized because it's going  
20 to vary from site to site. You can have a large  
21 variability within a small area, and this is going to  
22 affect, obviously, the contaminant fate and transport.  
23 Preferential pathways, if you do have both  
24 natural preferential pathways, such as the gravel layers  
25 or sand layers as well as utility corridors connect as  
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1 preferential pathways in which case contaminants move  
2 faster than they do through the natural soil.  
3 This probably isn't the case for Solid Waste  
4 Management Units 2, 5, 7, and 18 in which case for the  
5 most part the plume within the area -- primary area of  
6 the plume the groundwater is more than 10 feet below the  
7 ground surface, so, therefore, it's probably composed  
8 mostly of the utility corridors.

9 We talk about chemical and biological activity  
10 in the soil and groundwater and how they can affect each  
11 other. A lot of biological activity will tend to use up  
12 the oxygen, create anaerobic conditions, change the  
13 geochemical conditions in the groundwater. Similarly,  
14 if the right chemical conditions are there, we can have  
15 the right type of microbes. We can then -- you can  
16 degrade environmental contaminants. Environmental  
17 conditions such as rainfall, temperature, again, all of  
18 these are just factors that need to be considered.

19 If you wanted to look at it from a quantitative  
20 point of view, you could do numerical modeling. I just  
21 wanted to show some of the models that are typically  
22 available. There is a large variety of models that  
23 vary to try and solve various problems.

24 But what these do is they take all of the  
25 processes that we've talked about, and they put together

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1 equations, algorithms, which they intend to assign  
2 factors to various processes and allow you to put  
3 numbers in there, make estimates of what the conditions  
4 are, and, therefore, you can make -- begin to make  
5 estimates as to how far contaminants can travel, or you  
6 can begin to actually look at time intervals, how long  
7 it would take for a contaminant to degrade, and that  
8 type of thing.

9 Obviously you have to have a very good  
10 understanding of the physical system in order to make  
11 these estimates. You have to have a very good  
12 understanding of all those factors that we talked about.

13 I won't go into the type of models. Model  
14 selection, again, know what your problem is and what  
15 problem it is you're trying to solve. There is no one  
16 model that solves everything, gives you all the answers.

17 I just put together a couple of web sites that  
18 the U.S. EPA has. This is some calculators that allow  
19 you to estimate various parameters, and here are some  
20 public domain models.

21 With that I'll open it for any other questions  
22 which you may have.

23 Yes.

24 MR. McLEOD: Would the process that you have  
25 just described be accelerated, for example, in a

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1 wetlands environment?

2 MR. WICKHAM: Which process?

3 MR. McLEOD: The process of -- of transport of  
4 toxic materials in the soil or on the soil or under the  
5 soil.

6 MR. WICKHAM: Well, there is a wetland. It's  
7 going to pose a unique environment in which you can have  
8 basically a surface water transport. You can have a lot  
9 of processes that is active in a wetlands environment.

10 MR. BOYER: It's in a tidal wetlands so you  
11 might have more dispersion.

12 MR. WICKHAM: Yes. You're going to have  
13 physical currents which are going to be able to move  
14 chemicals through the surface water. You're going to  
15 have sediments where things can accumulate at various  
16 times, precipitate out, absorb back in.

17 Absorption is a reversible process, I forgot to  
18 mention. Things not only go out of the soil, it can  
19 come back in through the groundwater at various times.

20 So basically they absorb the particles, and they can  
21 come back in at various times as conditions change.  
22 Same with wetlands. You can get geochemical cycling.

23 There's a lot of processes that are going to be active.

24 MR. McLEOD: So, is your question [sic], yes,  
25 the wetlands is more --

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1 MR. WICKHAM: I guess I'm not sure what I'm  
2 comparing it to.

3 MR. McLEOD: Are toxic materials more likely to  
4 be transported in a wetlands than they are, for example,  
5 on solid ground? That's my question.

6 MR. WICKHAM: Well --

7 MR. BOYER: That's an exotic question. From  
8 what I understand from this, Dean, that there might be  
9 more biotic stuff in a wetlands area than there is in a  
10 clay area like -- like what we've got. And so certain  
11 things might be eaten up by the biotics quicker, so they  
12 wouldn't be distributed quicker than they would  
13 somewhere else. It's very complex.

14 MS. WALLERSTEIN: My impression is that the  
15 answer to that would be very site specific because like  
16 in this particular wetland we're talking about my  
17 understanding is it's cut off from tidal flow, so you  
18 don't have the usual tidal flow there.

19 But we will be doing groundwater monitoring  
20 which will address, you know, transport of contaminant  
21 from the landfill. And that's when -- you know, I  
22 guess --

23 You know, Jerry is providing us like a  
24 background training that we're then supposed to take and  
25 use when we do the groundwater monitoring, you know, the

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1 plan for that, what types of things we're going to look  
2 at, when we get the results from that, how to evaluate  
3 them, that we would, you know, use this background  
4 and -- and be able to more fully understand what the  
5 groundwater monitoring is telling us from the Site 1  
6 landfill.  
7 MR. McLEOD: So, that's what I'm trying to do  
8 here. I'm trying to make sure I understand this  
9 background material.  
10 MR. RAMSEY: But the one thing they do say  
11 generally, Dean, you've got to break it down to say  
12 well, groundwater, do you think that groundwater  
13 movement, just the physical conductivities of the Bay  
14 muds and the fine grain deposits we have on the Contra  
15 Costa shoreline in the tidal area, generally those  
16 are -- have lower conductivity, so the groundwater  
17 itself moves pretty slow through that kind of subsurface  
18 environment. And those are literally like a foot a year  
19 or less sometimes.  
20 Those kind of -- in comparison to being up in  
21 the -- the American River Canyon that's gravel and  
22 boulders, which groundwater would move very rapidly  
23 through those kind of physical soils. In addition you  
24 have all these -- in fact, they're fine grain. That's  
25 some of the geophysical.

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1 In a general sense, the geophysical, they have  
2 more surface area, clays absorb, and that's why the  
3 general sense of, you know, why -- you know, what's good  
4 about marshes is they are kind of the natural buffer why  
5 we have rivers and all the watershed from urban areas,  
6 they run in marshes and they do natural -- they're  
7 natural filters because they're trapping these things.  
8 Now, soils, it's kind of a different thing, I  
9 guess, because then you're dealing with surface flows  
10 and tides and waves and wind and those kinds of things,  
11 and then it's probably harder to generalize, I guess.  
12 MR. MEILLIER: I think what Dean wanted to ask  
13 is about the difference between surface in a saturated  
14 zone compared to like subsurface transport processes.  
15 MR. McLEOD: Well, actually, what you're asking  
16 [sic] -- if it's okay.  
17 So, what you're saying is that the mud is going  
18 to keep it from moving, but that the material that's  
19 been dumped by the Navy for the last 40 years -- it's  
20 going to transport quickly through that because it's  
21 much more loose and less compact than the Bay muds, and  
22 so, therefore, if we were to remove the -- the dumped  
23 material down to the Bay mud, then we would have the  
24 least amount of movement of toxins into the Bay.  
25 Is that accurate?

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1 MR. RAMSEY: Well, it's --  
2 MS. WALLERSTEIN: I guess --  
3 MR. RAMSEY: I mean, what we're -- actually, in  
4 terms of the remedy, though, it's like, well, no,  
5 because --  
6 MR. McLEOD: I'm not asking specifically --  
7 specific remedy. I'm asking in general principles  
8 because that's what we're talking about. I'm trying to  
9 make sure I understand it.  
10 MR. RAMSEY: Well, you could -- you could haul  
11 it away. I mean, it's getting into kind of the whole  
12 CERCLA process. Do you haul away stuff, or do you cap  
13 and contain and you --  
14 MR. COOPER: My understanding is he's not  
15 talking about the remedy. He's just saying the soil  
16 that's sitting there right now, without remedy, on top  
17 is of a looser quality than the Bay mud below.  
18 MR. RAMSEY: Generally I think that's true.  
19 MR. COOPER: The jump I'm hearing you make,  
20 though, if I understand where you're coming from, is  
21 it's been said that the water in the clay soils in the  
22 groundwater would move very slow. There is no  
23 groundwater in this aboveground soil. There's just  
24 whatever natural moisture is there, but -- so, it's not  
25 a groundwater flow in the same way there would be

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1 considered groundwater flow underneath.  
2 Generally you're right, it would move through  
3 that kind of soil, fluids -- if there were fluids like  
4 groundwater, they would. Just there is no groundwater  
5 up there to move, only in areas where that might be in  
6 contact with the wetlands.  
7 MR. McLEOD: Only in areas where that might be  
8 in contact with the wetlands.  
9 MR. COOPER: If it was in contact with the  
10 groundwater.  
11 MR. MEILLIER: Or surface water.  
12 MR. COOPER: Or surface water.  
13 MR. MEILLIER: Infiltration.  
14 MR. TYAHLA: By "looser," to me that implies  
15 a higher -- a larger --  
16 MR. RAMSEY: Sandier soils and things.  
17 MR. COOPER: Yeah, Dean's correct, there is  
18 higher conductivity up there. There's just a lot less  
19 water.  
20 MR. TYAHLA: There's a generalization that you  
21 can make, and I'm going to ask Jerry to tell me if this  
22 is a fair statement to make, and correct me if you don't  
23 agree with it. But generally, very generally, metals  
24 tend to not migrate very -- very well through soil.  
25 MR. COOPER: Through anything.

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1 MR. TYAHLA: They tend to absorb, you know,  
2 absorb the soil. It's part of their affinity.  
3 Different metals are different.  
4 I worked at a site where we literally had tons  
5 of lead ingots on top of a storage site. It was part of  
6 the Defense National Stockpile, if you ever heard of  
7 that. And they did a remedial investigation there. I  
8 think the furthest we saw lead in the ground there was  
9 two feet. And these things were like 50 years oxidized.  
10 I was scratching my head. I was amazed at  
11 that. I couldn't believe that. But that's how they  
12 move. So metals have a tendency to absorb to soil.  
13 Now, when you get into groundwater, this is  
14 where the organics tend to be more likely to dissolve in  
15 water and have a -- you know, better mobility in  
16 groundwater. And there it depends on the organics  
17 you're dealing with too. Some organics are going to be  
18 more soluble than others. So, that's -- those are just  
19 like general rules of thumb to look at.  
20 And for our sites metals transport seems to be  
21 more by the physical means, you know, erosion, surface  
22 erosion. Like we're working on a Feasibility Study for  
23 the Litigation Area, and a big part of that is going to  
24 be erosion control, like, you know, either remove --  
25 possibly remove some sediment or do something to

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1 alleviate erosion.  
2 So, it's not like it's getting dissolved and  
3 doing that kind of thing in groundwater. It's going to  
4 absorb the particles, and dealing with the particles are  
5 the issue. But for organic chemicals especially they  
6 would tend to be more mobile than like groundwater  
7 media.  
8 And the one thing on this graphic I wanted to  
9 point out, since we have a little time -- we didn't  
10 practice this. I'm sorry. But you're familiar with --  
11 And I love this graphic. I think this is the  
12 one to take home and really look at. But here you can  
13 see it indicates that in here you're dealing with  
14 contaminants in both air, water, and solids.  
15 So here you're really talking about when it's,  
16 you know, going into the liquid form, going into the  
17 groundwater, right. Solids, you got some absorbed to  
18 solid particles in the soil, and then you got air,  
19 really we're talking, you know, we got air up here. It  
20 could be offcasting, but soil vapors.  
21 So, what we're going to do with the SWMUs sites  
22 is we're going to go up and we're going to poke, and we  
23 have a plan essentially final for that, but put in  
24 probes in the ground, go about four feet down, and we're  
25 going to put a suction in those to get the soil gas out

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1 of the ground. The idea being that in the field measure  
2 what the soil gas concentrations are of certain volatile  
3 chemicals. And the idea being we'll put a pattern out  
4 there that if we get close to something that's like a  
5 source, you know, when we map it out, where that source  
6 seems to be. So, that's where you take advantage of  
7 trying to study soil -- soil gas.

8 If you were doing a remediation to something  
9 that has a lot of concentration, you know, like a source  
10 area in soil, one of the remediations we might consider  
11 is soil vapor extraction where you're actually reducing  
12 a plume in here, contaminated soil, by putting, you  
13 know, bigger size like soil gas wells, you might say,  
14 put a suction on it and run it through carbon and  
15 absorption units and cleaning up soil that way.

16 So keep -- keep that in the back of your mind,  
17 soil vapor and what that really means, and that's what  
18 we're talking about in there.

19 I just wanted to point that out since we have  
20 that lovely graphic.

21 MR. SKAREDOFF: I'd like to maybe chime in on  
22 Dean's question here. If you take this -- this drawing  
23 and you say instead of where we -- we were talking about  
24 it being a SWMUs and so on, if you put that in a  
25 wetland, well, then basically the water level's at the

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1 top.  
2 The source is right at the water level. So,  
3 whatever comes out of the pile goes into the water by  
4 definition because it's right there. It's a wetland.  
5 It's already wet. And so then, I mean, you comment  
6 about the old slough channel perhaps. I mean, that  
7 could be one of those preferential pathways perhaps to  
8 help move it.

9 MR. McLEOD: It's at the bottom.

10 MR. SKAREDOFF: Pardon?

11 MR. McLEOD: It's at the bottom.

12 MR. SKAREDOFF: You can think that that may be  
13 something that argues in favor of saying, well, it's  
14 been sitting there for -- basically not anything more  
15 being added to it for quite a few years, 50.

16 MR. SMITH: The landfill was probably started  
17 about 50 years ago.

18 MR. SKAREDOFF: Well, but when was it stopped?

19 MR. SMITH: Nineteen seventy --

20 MS. CANEPA: '79.

21 MR. COOPER: '79.

22 MR. SKAREDOFF: 20 years or whatever. Yeah, 25  
23 years. So, whatever got down in there has probably  
24 moved on. So you're not -- you don't have a big --  
25 probably don't have a big pocket of stuff sitting there

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1 because it's been degraded, moved out. Or you can say,  
2 on the other hand, there's a continuing source  
3 continuing to supply bad stuff to the Bay. So, I mean,  
4 like he said, there is no -- this isn't tidy, you know.

5 MR. RAMSEY: But the thing about -- if you look  
6 at groundwater movement around the Site 1, the -- the  
7 conductivity of the groundwater, because that's  
8 generally silts and clays, it's so slow that even 20  
9 years it's 20 feet. And so, it doesn't mean that stuff  
10 is -- the plume has completely left the Site 2 wells.  
11 Those wells are a couple hundred feet out.

12 MR. SKAREDOFF: Doesn't it seem kind of strange  
13 to be looking at the water in the ground when you've got  
14 water above the ground?

15 MR. RAMSEY: We can look at that also. The  
16 Navy has done that also.

17 MR. TYAHLA: We have wells out there in that  
18 area. And I'll tell you, I'm not a hydrogeologist, but  
19 it cracks me up. You go out there and realize that  
20 there are wells, surface water, like from the overflow  
21 of the slough.

22 MR. SKAREDOFF: I mean, is there a dry layer  
23 between the surface water and groundwater?

24 MR. TYAHLA: I mean, you gauge that -- you  
25 gauge that well, and the water level is going to be down

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1 below it, down below that surface water level.

2 MR. SKAREDOFF: Someplace there's a zone where  
3 it's not wet?

4 MR. RAMSEY: It's just you have different  
5 pressures. And so, there's different water elevations  
6 at different pressures. And it has to do with the --  
7 again, it's the low conductivities of those Bay muds.  
8 You can have surface water sitting there, and it's not  
9 reaching three feet down to get into the monitoring  
10 well.

11 MR. SMITH: I think Dean had something first.

12 MR. McLEOD: Just a little follow-up. This is  
13 why I'm concerned because from what I've read of your  
14 studies of the site, the 1939 aerial map where this  
15 plume was, and do you have a monitor -- a monitoring  
16 well right in -- in the slough where the slough was?  
17 Because I don't think you know where the slough was  
18 because you have only looked at later --

19 MS. WALLERSTEIN: Can I ask you something?

20 MR. McLEOD: Pardon me?

21 MS. WALLERSTEIN: Do have you a copy of those  
22 maps?

23 MR. McLEOD: I do, yeah.

24 MR. TYAHLA: First give us the year you're  
25 talking about.

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1 MR. McLEOD: 1939. Before you guys got there.

2 MR. RAMSEY: Well, the one thing I would say,  
3 Dean, I guess this whole issue about the groundwater  
4 assessments, the landfill ROD is dealing with a soil cap  
5 that it was actually -- I mean, I'm going to stick my  
6 neck out here. It was EPA that two years ago when we  
7 got the original -- the refloated ROD, it was EPA's --  
8 it was my recommendation to separate the groundwater  
9 from that landfill so that we could proceed with the  
10 containment cap. That generally is the kind of remedies  
11 that are done on landfills.

12 So we said, Navy, this is a case where you have  
13 something that's holding up this ROD. It's some  
14 discomfort, some uncertainties the regulators had with  
15 the groundwater study that was done. We were all new  
16 people on the base at the time. We said but we can  
17 proceed with the cap if we separate the groundwater, and  
18 the Navy agreed to do that. That was my recommendation,  
19 and they accepted that.

20 So we proceeded with this landfill ROD dealing  
21 with the containment cap on the surface to deal with any  
22 soil that could -- that could transport surface -- by  
23 surface flow into the marsh.

24 So, that's how the Navy is proceeding with the  
25 ROD. The groundwater will -- is still going to be

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1 studied. We're expecting -- we're going to be talking  
2 with the Navy anytime now about the groundwater, the --  
3 what we first need to do is sit down and look at the  
4 existing network of wells that are out there that were  
5 put in with the existing team in place at the time. But  
6 that wasn't me, and it wasn't Laurent at the Water  
7 Board.

8 So, what we've said is let's sit down and go  
9 back and look at the existing well network, find out if  
10 it's complete or not. We need to put in some new wells.  
11 The Navy agreed to have that discussion. That will be  
12 in a work plan for conducting this groundwater study.  
13 There will be essentially a supplement to the remedial  
14 investigation of groundwater at Site 1.

15 So we're going to have a discussion with the  
16 Navy about the completeness of the monitoring network  
17 because of issues that we've already recognized. The  
18 Water Board and EPA have all -- have all pointed out to  
19 the Navy we have some uncertainty, we want to sit down  
20 and in greater detail look at the existing network, look  
21 at the geology to make sure there aren't -- which we're  
22 aware of this existence of the sloughs there. That's  
23 obvious.

24 We know the sloughs were there. We've seen  
25 those figures. We want to make sure the wells are in

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1 the right place. There is actually -- there may be  
 2 wells out there that haven't been sampled that were  
 3 installed to assess water movement through some of these  
 4 existing or the historic channels that were out there.  
 5 And so we're going to be having those  
 6 discussions. And once we complete the work plan, we're  
 7 going to come back to the RAB, and we're going to  
 8 explain to people, I would hope the Navy -- we're going  
 9 to be working with the Navy to assure that they do that,  
 10 sit down and present to the public this is the plan now  
 11 to complete the groundwater assessments. And, in fact,  
 12 we'd be happy to talk with you as that's going on.  
 13 But we are aware of these old channels. And  
 14 the EPA has been scrutinizing the Navy regarding some of  
 15 the work that was done originally in the IR to assess  
 16 conductivities and what kind of fill material was dumped  
 17 into these -- into these channel beds, you know, filled  
 18 up the channels. So we -- we too are aware of these  
 19 kind of issues.  
 20 We're discussing -- we're aware. We've raised  
 21 them. We're discussing them with the Navy. We haven't  
 22 made any agreements, and we're going to be, you know,  
 23 having this plan developed this year. Actually, it was  
 24 supposed to be done. I think because of funding  
 25 those -- that -- that plan has not been developed.

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1 upon in the past and what we looked at when we had the  
 2 original ROD, there was nothing really screaming in the  
 3 groundwater.  
 4 I, again, have to accept that there were wells  
 5 put in, and those wells were generally accepted by the  
 6 people at the time. And we don't see screaming numbers  
 7 that's saying there is something we really should be  
 8 acting on for the groundwater. So, it's allowing us to  
 9 go ahead and do a more in-depth assessment, make sure  
 10 we're all, you know, in full agreement about the  
 11 groundwater, and proceed on that.  
 12 MS. WALLERSTEIN: We're coming up on the  
 13 required break. And I think we've gone a little far on  
 14 the fate and transport, but feel free to continue the --  
 15 the discussion at the break.  
 16 And so, are there any more questions on  
 17 the fate and transport?  
 18 MR. MENESINI: Yeah, I would just like to see  
 19 some of the measures you talked about because there is  
 20 so many variables. I wonder what kind of -- kind of  
 21 statistical modeling you have, Jerry.  
 22 MR. WICKHAM: It's all various levels of  
 23 sophistication. You can do very simple models, like  
 24 spreadsheet-type models, or you can do very hard  
 25 second-order algorithms that include all the factors.

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1 MR. McLEOD: So, then, is the EPA, then, going  
 2 to hold up the ROD, which would be putting a cap that  
 3 would be based on no knowledge of the groundwater? Are  
 4 they going to hold up the ROD?  
 5 MR. RAMSEY: No. No. It's not based on no  
 6 knowledge. We're looking at the existing groundwater  
 7 wells that were installed with a team of people that did  
 8 not include myself or Laurent, but they were involved in  
 9 the decisions about that years ago. So we had to accept  
 10 people had made some decisions.  
 11 There was an agreement with the Navy at that  
 12 time. We're going to scrutinize the Navy a little bit  
 13 more on that subject before we proceed to do this  
 14 supplemental investigation of the groundwater, though.  
 15 But that will actually be on a separate ROD. The  
 16 Navy --  
 17 On our Site Management Plan, the schedule  
 18 that's enforced by EPA, they'll have to complete the  
 19 study of the additional groundwater -- first we have to  
 20 work out the -- if we need additional wells or not, how  
 21 much more sampling, then go do that sampling, then they  
 22 would decide based on the results is there a need for  
 23 some kind of groundwater actions, again address  
 24 groundwater, but not the soil cap.  
 25 But, again, getting back to what was agreed

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1 So, there is a full range both in types of problems you  
 2 can solve and sophistication and operation of models.  
 3 MS. WALLERSTEIN: Yes, Igor.  
 4 MR. SKAREDOFF: I would like to thank Jerry for  
 5 an excellent presentation.  
 6 MR. SMITH: We have two questions back here  
 7 too, Margaret.  
 8 MS. WALLERSTEIN: Oh, I'm sorry.  
 9 MR. GLASER: Actually, this is a question for  
 10 Jerry regarding the models which you touched on, which  
 11 was in your last box there.  
 12 Could you maybe explain more where those fit in  
 13 in the decision-making process in terms of assessment?  
 14 Maybe in the context of what Phil was saying in terms of  
 15 groundwater assessments.  
 16 MR. WICKHAM: Well, they're tools. They're  
 17 just basic tools. As I say, it depends on what -- how  
 18 sophisticated you want to be, what your resources are,  
 19 what type of problem you're trying to solve. They're  
 20 very good for making -- if you understand -- again, if  
 21 you understand your physical system. If you don't  
 22 understand your physical system, no model is going to  
 23 give you the right answer.  
 24 So if you have -- if you have enough  
 25 information and you have -- have a sophisticated problem

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1 that you're trying to bring these resources to bear,  
2 then there is a wide variety of models to choose from.  
3 And what they'll do is instead of talking qualitatively  
4 about, gee, it's a long time or, gee, it's likely to  
5 occur, now you can put parameters on all of the factors  
6 we talked about. Every one of these factors you can now  
7 put a number on, a range of numbers.

8 ATTENDEE: What is the range?  
9 MR. WICKHAM: What they do is they take every  
10 one of these factors, and they come up with an  
11 algorithm --

12 MR. COOPER: A number.  
13 MR. WICKHAM: -- to try to make that estimate.  
14 So you assign factors to the geology, the hydrogeology,  
15 and each one of these factors -- so basically you're  
16 building a numerical model which tries to simulate  
17 what's actually happening in this whole physical world.

18 MR. TYAHIA: A big part of it is estimated or  
19 calculated or laboratory derived degradation rates.

20 MR. COOPER: Right, prediction.  
21 MR. WICKHAM: You're basically trying to take  
22 all of these factors and make your best estimate  
23 possible, look at ranges possible, and then do the  
24 sensitivity. You check your model. How sensitive is it  
25 to a change in one parameter versus another?

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1 Hydraulic conductivity typically is a very  
2 highly sensitive parameter, because as Phillip  
3 mentioned, it varies so widely, several orders of  
4 magnitude. Factor -- any type of factor that varies  
5 over several orders of magnitude is obviously going to  
6 have a big effect on your groundwater modeling.

7 Some of these other factors are minor -- are  
8 minor in their effect or sensitivity, but some can be  
9 very sensitive, particularly like the degradation rate  
10 because the physical system that you're trying to model  
11 is so complicated that you always have to realize that  
12 you're making an estimate based on your best judgment  
13 and available data.

14 For modelers you can never have enough data,  
15 almost it goes without saying. But that's where it  
16 comes in in making decisions. Now you begin to put  
17 numbers and make estimates of how long things will take  
18 and how fast things will move in the future. And, of  
19 course, you can use -- obviously you try to calibrate  
20 your model with the data you have and historical  
21 information that you have about how things have moved in  
22 the past.

23 Okay?  
24 MR. COOPER: All right.  
25 MS. WILLIAMS: Let's -- let's take a break for

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1 ten minutes. We'll come back in session at ten minutes  
2 to 8:00.

3 (Recess from 7:40 p.m. to 7:56 p.m.)

4 MS. WALLERSTEIN: I guess we'll reconvene.

5 The next item on the agenda is we have Aimee  
6 Trefilletti who is going to do -- give us a brief  
7 description of what ATSDR is and what their site history  
8 is and what the public health assessment is that they'll  
9 be doing for the Concord base.

10 Aimee Trefilletti.

11 MS. TREFILLETTI: I'm Aimee Trefilletti. I'm  
12 with the Agency for Toxic Substances and Disease  
13 Registry. And I just wanted to -- before I start, I  
14 passed out some handouts. I just want to make sure  
15 everybody got one. And there are a few sheets inside,  
16 just, you know, some information for everyone. And I  
17 have some business cards which I'll leave up here if you  
18 folks want to come up here afterward and get all my  
19 contact information on here.

20 So, as I said, I'm Aimee Trefilletti with  
21 ATSDR. I'm also -- I'm a lieutenant, an environmental  
22 scientist in the United States Public Health Service.  
23 We are a uniformed service as part of the Department of  
24 Health and Human Services versus a military service,  
25 part of the Department of Defense. And my duty station

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1 is ATSDR. We also have civil service folks that don't  
2 wear uniforms that work with us.

3 I have with me here tonight Libby Levy who is  
4 civil service Region 9 for ATSDR, and then also one of  
5 our consultants, Stacey Galik from ERD.

6 And if anyone has any questions about public  
7 health service, why we're in a uniform, that background,  
8 I can kind of give that to you afterwards, if you have  
9 any questions. People haven't generally heard of us, so  
10 sometimes there tends to be a lot of questions.

11 No outstanding questions right now, I'll move  
12 ahead.

13 I'm going to tell you a little bit about who we  
14 are and then get into, you know, why I'm here and why  
15 I'm here with our colleagues and what we plan to do.

16 We are an advisory public health agency. We're  
17 part of the Centers for Disease Control and Prevention,  
18 and we're based out of Atlanta, Georgia. That's where  
19 our headquarters is. And our mission is basically, you  
20 know, we are an environmental health agency. We use  
21 science to look at public health and to provide public  
22 health information about preventing exposure, harmful  
23 exposures, and diseases related to toxic substances.

24 We operate under a few different authorities or  
25 basically the laws that give us the authority to do what

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1 we do, CERCLA, which I know you've heard a lot through  
2 this whole process with Concord, SARA, the Superfund  
3 Amendment and Reauthorization Act, and we also have some  
4 authority under RCRA, the Resource Conservation and  
5 Recovery Act amendment.  
6 And, as I said, I'm based out of our Atlanta  
7 office, which is our headquarters. We also have  
8 representatives, region -- called regional  
9 representatives in ten regions, which actually happen to  
10 be the U.S. EPA regional offices as well. So our  
11 personnel, such as Libby from Region 9 ATSDR, works in  
12 the same building as U.S. EPA, you know -- for instance,  
13 you know, with Phillip Ramsey and --  
14 MR. COOPER: David.  
15 MS. TREFILLETTI: -- and David over here.  
16 Sorry.  
17 Sorry. I didn't mean to leave you out.  
18 MR. COOPER: I want to get some credit. I work  
19 there.  
20 MS. TREFILLETTI: So, that kind of gives a  
21 good, you know, relationship to have us so close to EPA.  
22 And, additionally, it's good for us to have  
23 representatives within the regions because they're  
24 closer to the communities because I'm all the way in  
25 Atlanta, and it's, you know, 2000 miles for me to get  
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1 out here, where Libby's in San Francisco.  
2 MS. LEVY: Call me all the time. Same time  
3 zone.  
4 MS. TREFILLETTI: So basically that's my agency  
5 in a nutshell. And what I do and what we're here to  
6 look at is doing a public health assessment. And what  
7 that does, a public health assessment is both a process  
8 and a document. I'll get into that more later.  
9 We review available information about hazardous  
10 substances at a site, such as the environmental  
11 contamination data that the Navy has collected, or the  
12 EPA has collected, and we evaluate whether exposure or  
13 people coming in contact with that contamination might  
14 cause harm to people.  
15 And we look at this, you know, not just is  
16 there a current risk, is there a future risk, we also  
17 try to look at the past. You know, would it be likely  
18 that people in the past were exposed and could be harmed  
19 from contamination.  
20 So one outline of our process of the health  
21 assessment is, you know, first we come, we look for  
22 data. We identify and obtain the data. And that's sort  
23 of what our initial site visit here is about, coming --  
24 you know, meeting with folks, getting information, then  
25 we characterize the public health exposure. You know,  
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1 are people coming in contact with contamination, or in  
2 the past have people come in contact with contamination.  
3 And then we evaluate the public health impacts.  
4 You know, based upon whether -- you know, people were  
5 exposed to contamination, are those levels likely to  
6 cause illness. And then based on what we find from  
7 those three steps we can recommend public health  
8 actions.  
9 As I said, we're an advisory agency. We can't  
10 force anyone to do anything, but we can recommend  
11 things. Such as if there's not enough data, we can  
12 recommend for those data gaps to be filled. If people  
13 are eating contaminated fish, we can recommend a fish  
14 consumption advisory. Or if we believe the community  
15 needs some public health education about a certain  
16 topic, we can arrange for that, and recommend that.  
17 MR. SKAREDOFF: Can you recommend a physical,  
18 for instance, or anything like that? Do you have the  
19 power to do that?  
20 MS. TREFILLETTI: We -- we can. You know,  
21 working with the EPA we do look at that. If there is an  
22 area where there is contamination, you say, soil  
23 contamination, and there is a soccer field on it, and we  
24 think there is a risk to children playing soccer, we can  
25 say, you know, either move the children away, or if you  
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1 want the children to play there, clean it up. That  
2 would be a good example of our recommendation.  
3 So, you know, I talk about exposure. Can  
4 people get to the contaminants, or can the contaminants  
5 get to the people? And there are five elements we look  
6 at in order to consider something an exposure pathway or  
7 a completed exposure.  
8 So, actually, Jerry's presentation is a good  
9 lead into this when we talk about contaminant source.  
10 So you have the steam cleaning area outside the  
11 building that puts VOCs in the ground, and that's your  
12 source. Then the VOCs travel into the groundwater, so  
13 that's your media. The environmental media is the  
14 groundwater. And then they put -- say someone puts in a  
15 well for their drinking water supply, so then people  
16 turn on their taps, someone turns on the tap in their  
17 home, the water comes out, that's your exposure point,  
18 point of exposure.  
19 MR. O'BRIEN: Now, can I just stop you there  
20 because --  
21 MS. TREFILLETTI: Sure.  
22 MR. O'BRIEN: -- for Concord nothing like that  
23 is planned.  
24 MS. TREFILLETTI: Right. Right, right, right.  
25 MR. O'BRIEN: So, where does that leave your  
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1 study of Concord?  
2 MS. TREFILLETTI: Okay. Well, I'm just  
3 using -- sorry. Maybe I should specify.  
4 I'm just using drinking water as -- this is  
5 just an example. I'm not saying necessarily in relation  
6 to what's happening at Concord. This is just a way to  
7 kind of understand what each of these steps means, like  
8 what an exposure point would be. So I could do the same  
9 example if there is contamination in the soil and people  
10 are coming in contact with it.  
11 MR. O'BRIEN: But people will not come in  
12 contact with it because there is no plan to have Concord  
13 cease as a base.  
14 MR. RAMSEY: Well, people that work on the base  
15 and things like that.  
16 MS. TREFILLETTI: Right. Or, you know --  
17 MS. WILLIAMS: Ray, would you let her finish  
18 her presentation, and then we'll get back and answer you  
19 in greater detail, please?  
20 MR. O'BRIEN: Okay.  
21 MS. WILLIAMS: Thank you.  
22 MS. TREFILLETTI: Okay. So we have an exposure  
23 point which would be turning on the tap. The route --  
24 route of exposure would be if someone filled up their  
25 glass with water and drinks it. That's your exposure  
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1 route, the ingestion. And then the receptor population  
2 would be the person that drank the water, or the people  
3 drinking that water. That's just kind of an example of  
4 how we look at the steps.  
5 We can do it with, you know, different sources  
6 and different media, and it's all site specific, applies  
7 to whatever's happening at a particular facility, at a  
8 particular site.  
9 And then another -- when we talk about having a  
10 completed exposure pathway, we take it -- another  
11 further look at it where we look at who are the exposed  
12 people because, you know, children are generally more  
13 susceptible to contamination in some circumstances.  
14 You know, are children being exposed, or are  
15 elderly being exposed? How are these people exposed?  
16 You know, are they breathing contaminated air, are  
17 they -- you know, picture eating contaminated fish. How  
18 often do the exposures occur? You know, are people  
19 coming in contact with contamination once a month, once  
20 a week, you know, once -- once a year because that can  
21 affect, you know, how much contamination they can take  
22 in their body.  
23 We look at how much of the chemical people are  
24 exposed to. And that's where information about, you  
25 know, the environmental data comes in. And then how  
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1 long did the exposure last. Was it over a lifetime?  
2 Was it just for a year? That information is also  
3 important.  
4 So those are -- that's how we look at exposure  
5 pathways. And then another important element in our  
6 process is we come and we try to find what is the  
7 community concerned about, what are their community  
8 health concerns.  
9 And, you know, the first element is because,  
10 you know, community health concerns are essentially part  
11 of community involvement. And then the second point is  
12 that, you know, people who live in the community, they  
13 know about how they might be being exposed to things and  
14 they know about past and present activities at a site,  
15 and they know about, you know, their own personal health  
16 impacts.  
17 And the way that we try and gather community  
18 concerns are several different ways we do that. You  
19 know, coming to RAB meetings, we have regional -- like I  
20 said, we have regional reps that can come and sit in the  
21 RAB meetings, bring concerns back to the team, or, you  
22 know, present information to RABs about stuff like that.  
23 We speak with local community groups, if there  
24 are any active around the site. We speak with the  
25 regulatory agencies because a lot of times, you know,  
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1 they have information about what people in the community  
2 are concerned about. We speak with the facility.  
3 For instance, a lot of times the public affairs  
4 officer has information about what people are concerned  
5 about. We look at the local newspapers because a lot of  
6 times that has information. And we can also do, you  
7 know, mailings out to the community to get in touch with  
8 them that way.  
9 And sort of -- one of my last slides here, this  
10 is just sort of a breakdown of sort of -- you know, I've  
11 spoken about the elements that go into the public health  
12 process. And this is sort of how we prepare the final  
13 document, which is, you know, the product that contains  
14 our evaluation.  
15 So this is our -- our site scoping visit. And  
16 it just didn't start, you know, when I got on the plane  
17 and came out here. You know, we've been speaking with  
18 folks at the Navy and folks at the regulatory agencies.  
19 I've been in contact with, you know, our regional  
20 office, you know, trying to find out what's happening at  
21 the site.  
22 And, you know, Concord is pretty unusual in  
23 that they have a lot of information available on line,  
24 so we have been able to kind of get started reviewing on  
25 that. So, that's -- and then we come out here and we  
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1 meet with more people and speak with more people and do  
2 the presentation to the RAB.

3 The second step, you know, if need be, we can  
4 have a second site visit or a public meeting. It's not  
5 always the case, but sometimes, you know, there is a  
6 need for that.

7 Third, once we do that, you know, we gather the  
8 data, we review it. You know, it's not just me that  
9 works on it, it's not just Libby. We have consultants  
10 we work with. I have people in my office. I'm an  
11 environmental scientist, but I work with toxicologists,  
12 I work with doctors, I work with engineers. So, you  
13 know, we have a lot of people that -- that consult and  
14 look at this information.

15 And then we do, you know, the things I spoke  
16 about. We do the exposure pathway analysis, and we  
17 prepare a public health assessment. We basically write  
18 everything down that we did and come to a determination  
19 about, you know, are people's public health -- are they  
20 being impacted.

21 And then we do a review within our agency, and  
22 then we send it out for data validation, which means we  
23 send it to the regulatory agencies and the Navy, the  
24 places we got data from, exclusively to find out if the  
25 information we have is correct. Like there hasn't been

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1 any additional sampling information that's available, or  
2 maybe we didn't say that Lake Michigan was in the middle  
3 of Concord. You know, it's just basically to make sure  
4 that everything is factual and correct.

5 And then we incorporate any comments that might  
6 come from that, make necessary changes, and then we have  
7 a public comment period where it goes out to the public.  
8 We send it to the local repository. We issue a press  
9 release. We send out hard copies to, say, members of  
10 our RAB group, any other members of the community that  
11 might be interested.

12 And then there's a 30-day period in which  
13 people can comment on it, and they send their comments,  
14 you know, back to me. And then there is the third  
15 internal review where we incorporate all of those  
16 comments. We actually have a separate appendix where we  
17 address each of the comments that come in. And then  
18 once that's done -- once that's done we send it out for  
19 final release.

20 So this is some more information about how to  
21 reach us. And, as I said, I have business cards up here  
22 that has all that information available. And that  
23 pretty much is it in a nutshell ATSDR, who we are, why  
24 we're here, what we plan to do.

25 Questions?

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1 Yes, sir.

2 MR. McLEOD: Do you have interest and  
3 jurisdiction or -- or responsibility for all of the  
4 sites, or just military sites? For example, we're an  
5 industrial belt, so do you -- when you come to town, are  
6 you also looking at the refineries and the --

7 MS. TREFILLETTI: Actually, that's a good  
8 question. I should have mentioned --

9 MR. McLEOD: I mean, that's part of the mix. I  
10 mean, if it's one thing, it would be one thing, but  
11 we're like getting hit by --

12 MS. TREFILLETTI: Right. I understand. There  
13 is a lot going on here.

14 I specifically work in federal facilities. I  
15 work in the Federal Facilities Assessment Branch. I  
16 work on Department of Defense sites. But ATSDR -- as an  
17 agency, we are required to do a PHA on -- a Public  
18 Health Assessment for all sites on the National  
19 Priorities List.

20 Even if a site isn't on a National Priorities  
21 List anyone can petition that ATSDR do a public health  
22 assessment. And so any citizen, you know, John Q  
23 citizen can send a letter into ATSDR saying that they  
24 want a public health assessment. Oftentimes we are  
25 asked by EPA or state agencies to do a public health

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1 assessment as well, and then the agency decides, you  
2 know, whether or not that's something that they want to  
3 do.

4 MR. McLEOD: If we wanted to find out if you  
5 had already done such things on the refineries and such,  
6 would we just speak to you?

7 MS. LEVY: Yeah. Give me a call because I'm in  
8 San Francisco. We have a lot of coordination and  
9 contacts, not just with EPA, but with the State  
10 Department of Health Services, with your county health  
11 officers. So, there is a lot of information out there  
12 about the facilities in your community, and we can help  
13 you coordinate with those and tell you. We may have  
14 done assessments, we may not have, but we can work with  
15 you on that.

16 MR. O'BRIEN: Have you done an assessment on  
17 the transshipment of spent nuclear fuel through the  
18 Weapons Station?

19 MS. LEVY: This is the first time we're at this  
20 facility. You were asking about other areas around  
21 Richmond or San Francisco or --

22 MR. O'BRIEN: This is right in the facility.

23 MS. LEVY: No. This is our first initial site  
24 visit here, so we haven't looked at anything yet.

25 MS. TREFILLETTI: Yes, sir.

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1 MR. SKAREDOFF: I had a question about your  
2 process, your last slide there.  
3 MS. TREFILLETTI: Sure, I can go back to that.  
4 MR. SKAREDOFF: Item No. 8, you get the public  
5 comment.  
6 MS. TREFILLETTI: Yes.  
7 MR. SKAREDOFF: And say if somebody sent in a  
8 comment, what sort of mechanism happens then? Is  
9 there -- is it just a reply written to it and stuck in  
10 the appendix, or is there a discussion with the person?  
11 Or how does that --  
12 MS. TREFILLETTI: It all depends. Sometimes we  
13 get comments that come in anonymously, and so we can't.  
14 If it's -- you know, if it's someone -- you wanted to  
15 make a comment, if you wanted to call me and give me a  
16 comment and discuss it, we could do that. Generally  
17 what we do -- we don't -- we don't reply to comments  
18 individually.  
19 Like if you send in a letter, I wouldn't write  
20 a letter as a response to that. I would take --  
21 basically I can either take your comment verbatim or I  
22 can paraphrase it, and I can either, you know, make  
23 changes in the document based on that comment and then  
24 say that we made changes based on your comments, or I  
25 can -- you know, if we decide not to incorporate those  
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1 comments or not to, you know, follow those comments, I  
2 will explain why. But it's all -- the comments are  
3 actually listed anonymously, so I wouldn't say that, you  
4 know, Mr. citizen said this.  
5 MR. SKAREDOFF: So the person or the agency or  
6 the entity, whatever, that made the comment doesn't get  
7 feedback on what happens with the comment? You need to  
8 go read the appendix or --  
9 MS. TREFILLETTI: That's correct. But if you  
10 wanted -- you know, if someone wanted to send in a  
11 comment and asked for a direct reply, then I would give  
12 a direct reply. But, you know, oftentimes on a site,  
13 you know, I'll get 300 comments. We have a particular  
14 site where that's been the case. So, you know, I  
15 can't --  
16 MR. SKAREDOFF: So a lot of them are pretty  
17 similar.  
18 MS. TREFILLETTI: Yeah. And a lot of times we  
19 get several similar comments, then we'll just group  
20 them, several people commented about this particular  
21 issue.  
22 Yes, sir.  
23 MR. O'BRIEN: So, do you have a timetable for  
24 Concord, for your study of Concord?  
25 MS. TREFILLETTI: That's a good question. We  
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1 actually have a work plan. I have Concord as doing an  
2 initial site visit. And, you know, I'm in the process  
3 of doing that now. And so we -- and, you know, a lot of  
4 the --  
5 MR. O'BRIEN: Could you elaborate a little bit  
6 on the community involvement component of this, where --  
7 when that takes place and what it will entail?  
8 MS. TREFILLETTI: Sure. I mean, that takes  
9 place starting now. I mean, this is the beginning of  
10 community involvement.  
11 MR. O'BRIEN: Is this the community  
12 involvement, this RAB meeting?  
13 MS. TREFILLETTI: It's one element of it.  
14 MR. O'BRIEN: And what are the other elements?  
15 MS. TREFILLETTI: Other elements would be, you  
16 know, we can have a regional rep continue to attend RAB  
17 meetings. You know, I'm available to speak with people  
18 if people have questions. That's another way we do  
19 community involvement. We can, you know, put together  
20 fact sheets and distribute them. We can do, you know,  
21 mailings to people around the area to see what their  
22 community health concerns are about the site.  
23 MR. O'BRIEN: So, can all of the members of  
24 this RAB get copies of your assessment?  
25 MS. TREFILLETTI: Oh, yes, definitely. In  
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1 terms of the -- when it comes out for public comment, is  
2 that what you're --  
3 MR. O'BRIEN: Right.  
4 MS. TREFILLETTI: Oh, yes. Definitely. You  
5 know, if you're on the RAB, your mailing address is  
6 there.  
7 I'm sorry if I didn't make that clear. That's  
8 something we do. Anyone that has been involved, if I've  
9 spoken with you, if you're on a RAB, if you're a  
10 regulatory agency, if you sent me a letter, your address  
11 goes on our mailing list, and you definitely get your  
12 own hard copy of it.  
13 MR. O'BRIEN: Now, doesn't the intended use of  
14 the site over the foreseeable future have some bearing  
15 on your study?  
16 MS. TREFILLETTI: Definitely. Definitely. You  
17 know, if we're saying that, you know, an area is going  
18 to remain an industrial area, that's --  
19 MR. O'BRIEN: Now, let's say for the  
20 foreseeable future there are no change in plans, but  
21 that at some point the status of the base does change,  
22 will you come in automatically and then reassess the  
23 situation?  
24 MS. TREFILLETTI: That's not -- let me see  
25 how -- you know, what I like to say -- we like to say  
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1 about our documents, I mean, this is a snapshot in time.  
2 We're going based on -- the document comes out, it's  
3 based on information we have at that time. If  
4 situations change --

5 MR. O'BRIEN: Let me rephrase this. What  
6 happens with a -- with a base that's closed? What has  
7 been your history with bases that have been closed where  
8 you have done an assessment and an evaluation?

9 MS. TREFILLETTI: That --  
10 Actually, do you --  
11 Dave?

12 MR. McCONAUGHY: What we've done in the past is  
13 we -- more or less we go with the base -- the reuse  
14 plan. And the public health assessment will base their  
15 exposure pathways upon the -- agreed upon between the  
16 community, state, whatever -- not whatever -- but all  
17 the partners involved as far as the future land use.

18 And then what we've done also is that if that  
19 were to change, usually there is a clause or a statement  
20 within the public health assessment that says if the  
21 future land use changes, then they would relook at it as  
22 appropriate.

23 Does that answer your question?

24 MR. O'BRIEN: It does. Thank you.

25 MS. TREFILLETTI: Thank you.

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1 issue. You can bring into us what are your public  
2 health concerns. We can, you know, come out for another  
3 visit, have, you know, a public availability session  
4 where folks can come -- you know, advertise in the paper  
5 and folks can come in and meet with us.

6 MR. SKAREDOFF: Is this sort of the typical  
7 pathway you go through when you do this kind of thing,  
8 or is each one individual?

9 MS. TREFILLETTI: It's just like when you're  
10 looking at chemical contamination. Everything is site  
11 specific.

12 Yes, sir.

13 MR. O'BRIEN: I'm glad you're here, but why  
14 have you taken so long to come here?

15 MS. TREFILLETTI: That is a good question.

16 MR. O'BRIEN: I mean, this -- this has been  
17 going on for like 12 years.

18 And my other comment is, if you have a public  
19 involvement component, why aren't you dovetailing what's  
20 going on -- the public involvement component with the  
21 RAB and feeding into the public relations plan,  
22 community involvement plan that the RAB establishes?

23 I mean, your -- your intentions are well and  
24 good, but it leaves me wondering, well, what actually is  
25 going to take place in terms of your community

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1 MR. SKAREDOFF: I have another question.

2 MS. TREFILLETTI: Yes, sir.

3 MR. SKAREDOFF: Still with the public  
4 involvement. How do people, say outside this room, know  
5 that you're here and that you're doing this? You know,  
6 you mention that people could call you, or they could  
7 write you and so on. How would somebody that lives over  
8 on Monument Boulevard even know that that was something  
9 they could do as this process is going on? Is there  
10 like an announcement in the paper that there is a public  
11 health assessment going on at the Naval Weapons Station?  
12 How does the public find out?

13 MS. TREFILLETTI: No. I understand. That's  
14 a -- that's a good question. We -- actually, we have  
15 community involvement, you know, people at our agency.

16 And, you know, this is just an initial site  
17 visit to come out and see what's happening here.

18 And then, you know, it seems like you have an  
19 active RAB, and that there are possibly members of  
20 the -- you know, outside this group that would be  
21 interested in having input in this process. And so, you  
22 know, working with them we can, you know, put -- we can  
23 do things like put a notice in newspapers.

24 We can do, you know, a mailing out to local  
25 residents, you know, saying we are looking at this

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1 involvement. Is it going to just be limited to this  
2 meeting here? I mean, what proactive steps are you  
3 going to take out in the community to let people know  
4 that you even exist?

5 MS. TREFILLETTI: Well, do you want me to get  
6 to your first question first?

7 MR. O'BRIEN: Please.

8 MS. TREFILLETTI: Okay. First question about  
9 where have we been. We -- ATSDR, the part I work in is  
10 Federal Facilities Department of Defense sites, and  
11 basically there are hundreds of sites that have, you  
12 know, been looked at or are continuing to be looked at.  
13 And, you know, Concord came onto the National Priorities  
14 List because, you know, as our mandate we have to look  
15 at National Priority List sites, we have to do a public  
16 health assessment. And one of the drivers for putting  
17 Concord on the National Priorities List site was because  
18 of ecological risks.

19 We're a public health agency, a human health  
20 agency. So, you know, in terms of a priority to look at  
21 for human health risks, there weren't any urgent public  
22 health hazards versus at other sites there were. So  
23 those were the sites that we looked at first.

24 And we actually work out an annual plan. We  
25 have a Memorandum of Understanding --

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1 MR. McCONAUGHY: And an annual plan of work.  
2 MS. TREFILLETTI: -- and an annual plan of work  
3 with each of the Department of Defense, Department of  
4 Navy, Department of Army, we work with the Coast Guard  
5 too, so -- and Air Force. So we put together with them  
6 a plan of work.

7 And, actually, it's only been recently that,  
8 you know, with -- Phillip Ramsey, actually, was asking  
9 me a question, how come there hasn't been a public  
10 health assessment. He spoke with one of our regional  
11 reps who called my boss who worked it out with our  
12 liaison to the Department of Navy to put Concord on  
13 their sites. So, that sort of -- that's why we, you  
14 know, weren't here when it was first -- when Concord was  
15 first put on the NPL.

16 And then your second question about why -- you  
17 know, what is ATSDR's involvement going to be. You  
18 know, this site visit -- this is our initial site visit.  
19 We come out here to gather information. We come out  
20 here to hear what people's, you know, concerns are and  
21 what the regulatory agencies' concerns are and to see  
22 the site. And so this is just -- we're starting up  
23 right now.

24 And so, you know, what I'm hearing from you is  
25 that there is a need for public involvement and there is  
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1 gardens and things like that.  
2 Would one of the things you could do is to work  
3 with the Navy to go in there and draw some of that well  
4 water at these residences and test it? Is that like an  
5 example of something maybe you could do?

6 MS. TREFILLETTI: That is. But, you know,  
7 if -- that could be a recommended public health action  
8 if it turns out -- you know, if we look at the data and  
9 see, you know, that there are screaming levels of  
10 contamination and -- you know, could possibly be in  
11 people's well water.

12 MR. GRIFFITH: Because my understanding is that  
13 there hasn't been testing at those domestic wells for  
14 different reasons. You know, seems to make sense that  
15 that could be a good indicator because I know -- I don't  
16 know what the Navy representatives are thinking right  
17 now -- probably want me to shut up -- but I do know that  
18 the community has -- the general public I've heard -- I  
19 work for the city -- there is quite a bit of concern  
20 about these domesticated wells because -- and then the  
21 other wells nearby that draw for ag- -- for landscaping  
22 purposes.

23 MS. TREFILLETTI: Irrigation.

24 MR. GRIFFITH: Irrigation. Excuse me. So,  
25 that's just an idea.

1 a need for continued community involvement. And so, you  
2 know, like I said, I have people that I work with that  
3 are community involvement specialists. You have people  
4 at the EPA that are in community involvement. We have,  
5 you know, members of the RAB that basically are  
6 representatives of the community basically. So, it's --  
7 you know, we --

8 I'm just starting on the site. I can't say,  
9 you know, exactly I'm going to do 1, 2, 3, 4, and 5  
10 because, you know, we will determine that as we go. But  
11 I can definitely tell you that that's -- I mean, that's  
12 a very important part of our process is having community  
13 involvement.

14 Does that address your question?

15 MR. O'BRIEN: Somewhat, yeah.

16 MS. TREFILLETTI: Yes, sir.

17 MR. GRIFFITH: I just had an idea, just --  
18 would one practical way of getting involved be, for  
19 instance, there are a number of single-family residences  
20 along the western boundary of this site, a couple of the  
21 sites at the base, and there is some question as to  
22 whether the domestic wells -- some of them are actually  
23 permitted, some of them not. A lot of people in those  
24 residences do -- I think a lot of them consume that  
25 domestic well water, and some of them use it for their  
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1 MS. TREFILLETTI: Do you know -- do you know  
2 of -- because there has been some question that, you  
3 know, maybe there are some wells that are used for  
4 domestic use such as drinking, bathing, that sort of  
5 thing, do you know specifically of areas where there  
6 are --

7 MR. GRIFFITH: Well, I know the general area as  
8 other people involved with the project know about, but  
9 there is the question as to which individual homes  
10 actually have them and draw upon them. And, you know,  
11 it's sometimes kind of secretive because some of the  
12 wells were done without permits, and then some do have  
13 permits. So, there are records of wells done with  
14 permits, but there are other --

15 MS. TREFILLETTI: But there are some sort of  
16 under the radar?

17 MR. GRIFFITH: Yeah.

18 MR. RAMSEY: Poor documentation of those wells.

19 MR. McLEOD: Right. I know of two of them.  
20 One of them is at my house in Concord, and another one  
21 is a neighbor across the street.

22 MR. MCGEE: And you drink that water?

23 MR. McLEOD: I don't think that anybody drinks  
24 that water.

25 MR. GRIFFITH: I've heard rumors that some

1 people may, but I know a lot of them use it for  
 2 irrigation in their backyards and such. And if they  
 3 have animals and children and things like that.  
 4 MR. McLEOD: My neighbor uses it for all his  
 5 orchards that he has in his yard, his lawn, and he's  
 6 eaten the fruit and vegetables that are coming out of  
 7 that.  
 8 MR. GRIFFITH: It just seems like it would be a  
 9 perfect match for something that you would get involved  
 10 with.  
 11 MR. TYAHLA: One thing Aimee told us is that  
 12 they're generally not in the data collection, new data  
 13 mode. It's like --  
 14 Something like that might be a recommendation  
 15 you would make -- right? -- in your assessment?  
 16 MS. TREFILLETTI: Right. Right.  
 17 MR. TYAHLA: If you looked at the existing data  
 18 and said, well, you really need to do Navy, make a  
 19 recommendation, but they aren't -- part of their mission  
 20 isn't to come out and start like sampling wells.  
 21 MR. GRIFFITH: I understand.  
 22 MR. TYAHLA: So, it really comes down to like  
 23 what recommendations they would make about those  
 24 irrigation wells and stuff like that.  
 25 MS. TREFILLETTI: I mean, that's definitely an

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1 community folks, do you have a schedule or a plan to do  
 2 that?  
 3 You said I have these options. I could do  
 4 this, I could do this, I could do this. Ray, amongst  
 5 others, is saying we would really like the community to  
 6 feed information to you.  
 7 Based on that, do you have, for instance, a  
 8 next step that you do -- that you will do, then, like a  
 9 public notice saying, hey, we're here, we're doing this  
 10 work, or, you know, whatever, because otherwise you're  
 11 never going to know about all these offsite wells  
 12 because people aren't going to come through.  
 13 So, do you have some thoughts about like what  
 14 your next community involvement step might be even if  
 15 you don't have the whole plan?  
 16 MS. TREFILLETTI: Well, you know, that's --  
 17 that's a good question. I'm not a community involvement  
 18 specialist. I mean, I'm an environmental health  
 19 scientist, you know, that's what my field of study is.  
 20 And, you know, the -- the purpose of this visit was to  
 21 come out, you know, to gather information. And so, you  
 22 know, that's something that I will work out with  
 23 community involvement folks. You know, I can't tell you  
 24 right at this moment like, okay, the next thing I'm  
 25 going to do when I get back to the office on Thursday

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1 issue that we're going to be looking at.  
 2 MR. McGEE: Does the Navy irrigate their --  
 3 their parklands with --  
 4 MR. TYAHLA: On-site, on-base data too.  
 5 MR. O'BRIEN: Let me approach this from another  
 6 angle. And that is, the water district in Bay Point is  
 7 desperate to drill wells and utilize the water that is  
 8 in the ground over purchasing water from Contra Costa  
 9 County Water. Another factor is that those people who  
 10 sold their land to the Navy did retain chemical rights  
 11 to their property, and so the question arises, is that  
 12 water that is on Navy property, the rights of which are  
 13 still owned by property owners who sold their property  
 14 to the Navy -- is that water accessible and usable for  
 15 drinking?  
 16 MS. TREFILLETTI: That's --  
 17 MR. O'BRIEN: I don't expect you to answer it,  
 18 but I mean that's a question.  
 19 MS. TREFILLETTI: That's definitely something  
 20 that we'll -- we'll look at then, definitely.  
 21 Yes.  
 22 MR. COOPER: To try to loop this back to one of  
 23 Ray's earlier questions about community involvement,  
 24 because I thought that's what this was about, in order  
 25 to get the input that you're looking for from the

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1 is, you know, X, Y, and Z --  
 2 MR. COOPER: Okay.  
 3 MS. TREFILLETTI: -- because this is -- we're  
 4 at the very beginning stages right now, so I can't.  
 5 MR. COOPER: Just a suggestion. You could have  
 6 them call me.  
 7 MS. TREFILLETTI: Definitely. I had that in  
 8 the back of my mind.  
 9 MR. COOPER: I'm just offering.  
 10 MS. TREFILLETTI: We were going to get you  
 11 involved. Don't worry.  
 12 MR. O'BRIEN: One more question.  
 13 MS. TREFILLETTI: Yes, sir.  
 14 MR. O'BRIEN: When the Department of Energy as  
 15 the lead agency for the acceptance of foreign spent  
 16 nuclear fuel was contemplating using Concord as a  
 17 transshipment site, did you make a review at that time  
 18 and pass any judgment on the human health risk factors  
 19 of doing that approach?  
 20 MS. TREFILLETTI: No, I don't believe that we  
 21 did. I don't think --  
 22 MR. McLEOD: That was 1995.  
 23 MS. LEVY: No.  
 24 MS. WALLERSTEIN: It's not a CERCLA or SARA.  
 25 MS. TREFILLETTI: Right. That's something

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1 that's sort of out of our purview.  
2 MR. O'BRIEN: It's out of your purview?  
3 MS. TREFILLETTI: Yeah.  
4 MR. O'BRIEN: Why is that?  
5 MS. TREFILLETTI: Well, we are -- you know, in  
6 terms of we, you know, do public health assessments for  
7 facilities that are on the National Priorities List as  
8 per CERCLA. And, you know, if a specific issue might  
9 come up on a base or on a site, that doesn't necessarily  
10 mean that we would get involved.  
11 MR. O'BRIEN: So the -- the subject of the  
12 transshipment of spent nuclear fuel would not come under  
13 your purview?  
14 MS. TREFILLETTI: Not in terms of, you know,  
15 public health assessment.  
16 MS. LEVY: Again, we're a nonregulatory  
17 agency --  
18 MR. O'BRIEN: I understand that.  
19 MS. LEVY: -- so we don't --  
20 MR. O'BRIEN: Strictly an advisement.  
21 MS. LEVY: Right, when we're doing health  
22 assessment work or health consultation work. So if we  
23 weren't called in to look at it, and it was just a  
24 regulatory issue, there was no way we would be involved  
25 in it.

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1 MS. WALLERSTEIN: I guess, as I understand it,  
2 for instance, their authority comes from CERCLA, RCRA,  
3 SARA. If you, for instance, were concerned about toxic  
4 air contaminants coming from an oil refinery, you  
5 wouldn't go to ATSDR --  
6 MR. O'BRIEN: Well, excuse me. Excuse me for a  
7 second, Margaret, though.  
8 Are we talking about your unit, or are we  
9 talking about the service itself?  
10 MS. TREFILLETTI: The agency.  
11 MR. O'BRIEN: The agency, right.  
12 MS. TREFILLETTI: We're talking about my  
13 specific agency, Agency for Toxic Substance Control.  
14 MR. COOPER: The whole agency.  
15 MR. O'BRIEN: But you're concerned with CERCLA  
16 sites.  
17 MS. LEVY: Our agency.  
18 MR. O'BRIEN: Your agency is. It's restricted.  
19 MR. COOPER: It was actually formed by the  
20 CERCLA law.  
21 MR. O'BRIEN: I see.  
22 MR. COOPER: It's a creation of CERCLA.  
23 MR. SKAREDOFF: So, it's an agency involved  
24 with hazardous waste issues. So I guess it's a  
25 definition. Is a spent -- spent nuclear rod a hazardous

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1 waste or not?  
2 MS. LEVY: Okay. We do get involved with  
3 haz- -- we get involved with not just NPL sites. We do  
4 get involved with hazardous materials, hazardous waste  
5 sites. If there is another regulatory agency that's  
6 covering that, like the Nuclear Regulatory Commission,  
7 we're not going to be involved in it.  
8 MS. TREFILLETTI: You know, for instance, if --  
9 you know, if they were looking at that issue and someone  
10 was working on that knew about ATSDR and said, you know,  
11 hey, I know some folks at ATSDR that have some, you  
12 know, expertise in this field, why don't we give them a  
13 call and see -- you know, start a dialogue with them.  
14 I mean, that certainly can happen. But unless  
15 we sort of get brought to the table, you know, we don't  
16 necessarily go out and look -- look for that kind of  
17 thing, if that makes sense.  
18 MR. SKAREDOFF: Well, it says in here "get  
19 involved with" -- "protect the public from hazardous  
20 wastes and environmental spills of hazardous  
21 substances."  
22 So if somebody was contemplating processing or  
23 transshipping nuclear rods, that has -- that's one  
24 thing. But let's say that's going on and there's a  
25 train accident and a bunch of it gets out, is that a

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1 case where you would get involved then?  
2 MS. LEVY: Yes.  
3 MR. RAMSEY: EPA would probably bring in ATSDR.  
4 And EPA was involved. This is all before my  
5 time. We do have a radiation expert in Superfund. He  
6 was involved with some of the groundwork there. I  
7 believe they did some baseline work prior and possibly  
8 afterwards.  
9 MR. SKAREDOFF: I guess I'm just trying to  
10 address what I perceive to be Ray's concern, and that is  
11 that -- who's watching out for public health in case of  
12 an issue like this?  
13 MS. LEVY: Yeah. Again --  
14 And we also don't look at regular shipments of  
15 any other hazardous materials. We have DOT doing that.  
16 There is other agencies who do that. We are looking  
17 at -- and it's kind of a tricky definition. It says  
18 "hazardous substances."  
19 MR. SKAREDOFF: Yeah.  
20 MS. LEVY: Now, if it's in a truck, it's a  
21 hazardous material.  
22 MR. SKAREDOFF: Substance is something that's  
23 gotten outside of its container?  
24 MS. LEVY: It's a more broader term whereas the  
25 hazardous material is something that the Department of

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1 Transportation is going to be using. And we don't get  
2 involved in just shipments of batteries and other things  
3 that have hazardous -- hazardous materials the same way  
4 if there's a shipment of the nuclear material, the NRC  
5 is involved in that.

6 MS. WILLIAMS: Any other questions? It's your  
7 last chance.

8 Thank you, Aimee, for being so patient.

9 MS. WALLERSTEIN: Thank you very much, Aimee.

10 Okay. I guess the next thing is the RAB  
11 report. The RAB 2004 schedule.

12 Mary Lou, did you touch on membership  
13 activities earlier?

14 MS. WILLIAMS: Not publicly.

15 MS. WALLERSTEIN: All right. I passed this out  
16 at the break, the proposed RAB 2004 schedule. And  
17 basically what we did was we sat down, we went through  
18 the Site Management Plan and looked at which documents  
19 are going to be coming out when and tried to scope out  
20 what we thought the presentation schedule would be for  
21 all of 2004.

22 What I wanted to do was go over this a little  
23 bit and have a vote and have the RAB, you know, adopt  
24 this as our framework for operating this year. I'm sure  
25 that some of these things will change. I'm sure that

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1 maybe some things will move up, some things will get  
2 postponed. If one month gets clogged up, we might  
3 decide that we don't need a presentation on something.

4 But basically this is a planning framework.  
5 So, what it does is if there are any other presentations  
6 that need to be made, and we have to make decisions  
7 perhaps not to -- well, if we wanted to drop one topic  
8 or handle it otherwise, we could do that, but we have a  
9 framework then to make decisions about what we want to  
10 hear at the meetings.

11 So, does anybody have any questions on this? I  
12 did send this out to all the RAB members and the  
13 regulatory agencies ahead of time, so everybody should  
14 have seen this.

15 Does anybody have any questions about this or  
16 the concept?

17 MR. SKAREDOFF: I think it's a really great  
18 idea to try to get a sense of what's going to happen  
19 over the whole year, kind of gives an idea of direction.

20 I notice that in February we have an item here  
21 for Tidal Area. I just from my own personal experience  
22 noticed that quite a few RAB members have a lot of --  
23 and some regulatory folks also have a lot of issues with  
24 the Tidal Area. And so, is that -- RPM report, I guess  
25 that's Steve talking about the Tidal Area.

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1 MR. TYAHLA: That's general update where we're  
2 at. Not based on a particular report, just --

3 MR. SKAREDOFF: Okay. I think somewhere along  
4 in here we need to devote some time to a general  
5 discussion of what everybody is concerned about with the  
6 tidal areas so we can kind of get everything out in the  
7 open and addressed so it doesn't just kind of sit there  
8 under the surface. I don't know if that's the right  
9 time to do that. Somewhere along the way we should have  
10 a devoted block of time for the Tidal Area, in  
11 particular Site 1.

12 MS. WALLERSTEIN: Uh-huh.

13 MS. WILLIAMS: Ray, is Patrick planning to do  
14 his presentation on the Tidal Area?

15 MR. O'BRIEN: On the Litigation Area.

16 MS. WILLIAMS: Okay. So, that -- that will  
17 give us time to discuss everything after what he's told  
18 us; right?

19 MR. SKAREDOFF: That's the Litigation Area.

20 MS. WILLIAMS: Yeah, but where does the  
21 landfill come in?

22 MR. O'BRIEN: We already discussed that.

23 MR. TYAHLA: Tidal Area sites, the other ones  
24 2, 9, and 11.

25 MR. SKAREDOFF: It doesn't seem to be a settled

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1 issue. I'm hearing a lot of stuff.

2 MS. WILLIAMS: That's what I was trying to say.  
3 I think we need more time on the landfill. I'm hearing  
4 people that are kind of -- they're not settled in their  
5 minds.

6 MR. O'BRIEN: Well, Mary Lou, Patrick was going  
7 to present at this meeting, and he got postponed. Are  
8 you suggesting that he be postponed again?

9 MS. WILLIAMS: No, I'm not. But I'm just  
10 suggesting to follow up with Igor that at some point  
11 because there seems to be a lot of -- of questions on --  
12 you know, in individual minds on the -- the landfill  
13 itself that at some point we need to -- we need to sit  
14 down and discuss it all together as a group rather than,  
15 you know, an E-mail back and forth to one or two people.  
16 I just think we need more time on this issue.

17 MS. WALLERSTEIN: Well, we do have -- you know,  
18 in May we have -- the Site 1 remedial design will be  
19 discussed. I think we also have -- let's see. In  
20 August Tidal Area Sites 2, 9, and 11 Feasibility Study  
21 discussion.

22 MR. O'BRIEN: Well, let me ask you this, do we  
23 need to have this discussion before the decision is made  
24 on the -- on the landfill?

25 MR. TYAHLA: The decision is pretty much made

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1 by the Navy. It's just a matter of getting the ROD  
2 signed. How we're proceeding with that.  
3 MR. O'BRIEN: That's not what I understand from  
4 Phillip's --  
5 Your letter that you have given us a copy of  
6 tonight. You still have some concerns.  
7 MR. TYAHLA: About the Site 1 ROD?  
8 MR. RAMSEY: We're still -- we're planning to  
9 sit down. That's right. When my letter was issued  
10 there was agreement that we would still have informal  
11 discussions. It's really final tweaks essentially,  
12 though.  
13 MR. TYAHLA: Yeah, I don't think there's any  
14 issues that we aren't going to be able to resolve.  
15 MR. RAMSEY: We would hope at least. But we  
16 want to preserve the right to maintain informal  
17 discussion, not have to be forced to put it in writing  
18 and send it up the chain for, you know, the dispute  
19 resolution committee, which is our division.  
20 MR. TYAHLA: That was more of a thing because  
21 of FFA.  
22 MR. RAMSEY: We actually still feel we're  
23 relatively close, and so we want to preserve the right  
24 to still have that discussion. We're actually hoping to  
25 do this in about a -- it's going to be, I guess, when  
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1 the Navy is going to sit down -- our attorney is going  
2 through making the final recommendations that we'll sit  
3 down with the Navy and say, you know, do you agree to  
4 make this change and this change and this change, and  
5 then we would be prepared to make the recommendations to  
6 the managers to sign the ROD.  
7 And we'll also have that -- part of that  
8 meeting would be giving time for the Regional Water  
9 Quality Control Board. Laurent still has some issues.  
10 And we wanted to give equal time for the Regional Board  
11 to, you know, discuss that with the Navy also to make  
12 some final changes in the ROD, and then make a decision  
13 if we're going to -- there is still items, if the Navy  
14 decided has to be done, then I suspect be prepared -- my  
15 manager would be prepared to sign the Record of  
16 Decision.  
17 And if we ask the Navy to make certain changes  
18 and we feel those are deal breakers, then we would not  
19 sign the ROD, and we'd then go -- elevate into formal  
20 dispute. It would be documented and then sent up to the  
21 dispute resolution committee, which is the division  
22 director.  
23 MS. WILLIAMS: Ray -- I mean Dean. I'm sorry.  
24 MR. McLEOD: I'm wearing my hat as the LRA  
25 representative, and we paid the -- Patrick, thanks to  
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1 the EPA giving us a grant, to do that -- that review of  
2 the documents and to make the presentation. I felt that  
3 his presentation was very provocative. Is the Navy  
4 going to respond in writing to his presentation?  
5 MR. TYAHLA: We responded to the comments we  
6 got already. We sent the letters out. It went out  
7 on --  
8 MR. RAMSEY: December 19th or something, isn't  
9 it?  
10 MR. TYAHLA: Yeah, 19 December a letter went  
11 out.  
12 MR. McLEOD: I'm sorry. I didn't see that.  
13 MR. SMITH: Dean, would you like a copy of  
14 that?  
15 MR. McLEOD: Ray has one.  
16 MR. TYAHLA: Well, we responded to his  
17 comments, and we -- the ROD -- the remedy and the ROD is  
18 still planning to get finalized bottom line.  
19 MR. McLEOD: There was nothing in there that --  
20 MR. TYAHLA: We've changed our mind on what  
21 we're going to do? No. No. But the responses are out  
22 and, you know, comment by comment they're responding to  
23 it.  
24 MR. O'BRIEN: So, Igor, could I ask you, do you  
25 see any need to have any further conversation about this  
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1 since we're so near a decision?  
2 MR. SKAREDOFF: Well, yeah. The answer is yes.  
3 MR. O'BRIEN: Okay.  
4 MR. SKAREDOFF: One of the reasons for it is I  
5 haven't personally felt like the issue of protection of  
6 the site from lateral movement has been addressed that I  
7 could tell overtly. I talked --  
8 We're hearing about the cap so that we don't  
9 get stuff leaching down from above and getting down this  
10 way, but what we haven't heard is what are we doing  
11 around the perimeter of the thing, which is actually  
12 immersed in the water. That's just my own personal  
13 thing, nothing more.  
14 The other thing comes from the letter, which I  
15 guess you're going to talk about here shortly, the  
16 minutes of the remedial project managers meeting. On  
17 Page 3 there is a whole list of issues that evidently  
18 have not been settled yet. Landfill gas control  
19 measures, process of surface water erosion, leachates  
20 can't leave a footprint, functioning contaminants,  
21 containment structure.  
22 I guess what I'm -- I'm not comfortable with is  
23 the way I read this is the ROD's going to be signed even  
24 though those issues have not been resolved. And I'm  
25 really having a hard time saying we ought to be signing  
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1 this if we've got this list of six issues that have not  
2 been resolved.

3 MR. MEILLIER: Igor, first, there are four  
4 issues that have not been resolved per Water Board  
5 policies and regulations. And if those issues are not  
6 resolved -- if any of them are not resolved, or there is  
7 not an agreement made between the Navy and the Board,  
8 the Board will not sign the ROD. The Board will issue a  
9 letter that says -- specifically stipulates those four  
10 points and give, you know, a conditional -- basically a  
11 signature, say we signed but we are not -- but this is  
12 on condition that those four issues are addressed. And  
13 if they are addressed --

14 It's basically a condition of signature. We  
15 agree with the -- with the topics and the other decision  
16 in the document, but we do not agree with those four  
17 points.

18 So the Board will definitely -- I've talked  
19 about this with my managers, my super- -- supervisor  
20 this last two weeks, and he has agreed with me that  
21 definitely those topics need to be resolved before the  
22 Board would give an unconditional signature to the  
23 document.

24 MR. SKAREDOFF: So the statement here is that  
25 staff also stated that management has signed a

1 conditional concurrence letter if the ROD did not  
2 resolve the following outstanding issues, and then it  
3 lists six issues here.

4 MR. MEILLIER: Exactly.

5 MR. SKAREDOFF: And I guess the key here is  
6 conditional, signing on the condition that those issues  
7 are going to be resolved to the Board's satisfaction.

8 MR. MEILLIER: You know, a letter like this has  
9 never been drafted for all the language, so it would be  
10 definitely a novel letter for me. And I've never -- I  
11 don't really --

12 MR. SKAREDOFF: It'll be interesting. We're  
13 kind of signing this except, huh?

14 MR. MEILLIER: Huh?

15 MR. SKAREDOFF: It's kind of like we'll sign  
16 this except.

17 MR. TYAHLA: I don't think they're planning on  
18 signing the ROD. I think they're planning on signing a  
19 letter of concurrence with those conditions on it.

20 And if you read the response to comments that  
21 went out on the 19th, pretty much covers the Navy's  
22 position on those things. And a lot of them relate to  
23 groundwater issues that are going to be part of the --  
24 follow on after groundwater investigation is done and  
25 the groundwater ROD is completed.

1 Keep in mind the existing ROD with the cap says  
2 we are going to do that. It says we're going to do a  
3 groundwater study, it says we're going to develop a  
4 groundwater ROD. So -- and when you look at our  
5 response to comments, and including -- covering those  
6 issues, well, one of them -- we think the landfill gas  
7 issue, we'll basically cover that in the design. We are  
8 going to include that.

9 But the other things that relate to groundwater  
10 pretty much we're focusing this one on just the cap and  
11 containment. Groundwater is going to be addressed  
12 separately. So, it's not like we're saying we're never  
13 going to deal with the groundwater. We're saying we're  
14 going to deal with it separately.

15 MR. SKAREDOFF: Okay. And what about surface  
16 water?

17 MR. TYAHLA: Surface water is going to be an  
18 issue we deal with in the design, how we're going to  
19 control erosion.

20 MR. SKAREDOFF: The surface water I'm talking  
21 about is the water that the site is immersed in because  
22 it's sitting in water.

23 MR. TYAHLA: Well, part of the groundwater  
24 study is going to look at the hydrogeo- -- hydrogeologic  
25 situation out there. And other things that can happen

1 during the design, what you mention about the side of  
2 the landfill, but the -- that's something I definitely  
3 have in mind to taking, you know, a hard look at during  
4 the design.

5 MS. WALLERSTEIN: I think the -- the cap itself  
6 isn't going to come down and end at the surface water  
7 level. It's going to continue down. It's supposed to  
8 protect the --

9 MR. TYAHLA: Well, the design is still to be  
10 done, so I don't want to get too --

11 MS. WALLERSTEIN: Well, it would protect  
12 against land erosion.

13 MR. SKAREDOFF: Well, conceptually I guess what  
14 I'm looking for is some kind of assurance, I guess, that  
15 something -- you know, you got this mound of stuff  
16 that's sitting in a puddle of water. We're going to put  
17 a cap on top of it so if it rains the water is not going  
18 to percolate through the cap and go into the water.  
19 Okay. That's cool.

20 However, it's sitting in a puddle of water.  
21 How are we going to protect the puddle of water from  
22 being contaminated from the stuff that's inside the  
23 mound? That's as simple a way as I can put it.

24 And that's my concern because what are we doing  
25 to keep the stuff in here from getting out into the

1 water? I mean, it's been sitting there for 40 years  
2 doing that already.  
3 Okay. So maybe it's not all gone yet. Maybe  
4 there is still stuff in there that should be taken out,  
5 be protected from getting out. And since we're not  
6 going to go ahead and core through and find out what's  
7 all in there for all those good reasons that we  
8 discussed already, we don't know what's there, so we  
9 ought to protect the surroundings from having the stuff  
10 get out to it.

11 MR. TYAHLA: And you're really touching on two  
12 issues there simultaneously. One of them is a design  
13 issue, you know, what the edge of that is going to be  
14 like, and the second one is going to be --

15 MR. SKAREDOFF: I'm just looking for -- not a  
16 design. I'm just looking for an intention to protect  
17 the surrounding water that it's sitting in from the  
18 stuff getting out to it. However you design it I'm not  
19 going to sit here and say you should pile and -- I'm  
20 not -- I don't want to get into that. I just want to  
21 hear something that says we're going to protect that  
22 water from having stuff get into it from inside the  
23 mound of stuff -- inside the mound of landfill, I guess  
24 would basically be the bottom line for me.

25 MR. RAMSEY: I'd just say from the EPA's

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1 That's why I think this original discussion is right.  
2 We need to work on schedules to talk about these things.  
3 For two years we've been trying to sign the ROD.  
4 MR. SKAREDOFF: I'm with you. I would like to  
5 move ahead and get this thing fixed. I'm not trying to  
6 hold it up.

7 MR. RAMSEY: Right. But I'm -- I think -- and  
8 you know, EPA would be happy to, you know, support, to  
9 explain -- you know, establishing times so the Navy can,  
10 you know, organize the materials to present these things  
11 and maybe raise these issues. That time never seems to  
12 be provided to the Navy, I guess.

13 MR. SMITH: It looks like we're going to have  
14 time at the very next meeting for your concerns to be  
15 addressed.

16 MR. RAMSEY: Well, the only trouble, though, is  
17 when I read this I say Tidal Area, and the Tidal Area to  
18 me is -- the Tidal Area Sites are 2, 9 and 11, and it's  
19 not Site 1. So I think we just need to be real clear.  
20 If you want to talk about Site 1, then just schedule it  
21 and let the Navy, you know, take a stab, and we'll try  
22 to work with the Navy.

23 MR. TYAHLA: The last item on the agenda for  
24 the next meeting, if somebody wants to -- we can put  
25 something together if someone wants to have that at the

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1 standpoint we have to assess what's in the groundwater  
2 before we --

3 MR. SKAREDOFF: I'm not talking about the  
4 groundwater; I'm talking about the puddle.

5 MR. RAMSEY: But see, that's the trouble, Igor,  
6 I'm not sure this concept of -- it's not floating on  
7 water. It's sitting on Bay mud, and so there is --

8 MR. SKAREDOFF: Water lapping at the edges of  
9 it.

10 MR. RAMSEY: That's from Site 2, correct.  
11 Surface water that tidally changes at Site 2. So we're  
12 also looking at Site 2 as separate sites. You're  
13 familiar with the sites there. Maybe the Navy just  
14 needs to have a whole time to talk about this. EPA  
15 would be happy to do that. Last RAB we had --

16 MR. O'BRIEN: But isn't this a moot point if we  
17 have a decision made before the next RAB meeting?

18 MR. RAMSEY: Well, we've been trying -- it's  
19 like we'll always -- the Navy, the RAB needs to set  
20 time, you know, to talk about these things, and then we  
21 can have a thorough discussion.

22 MR. O'BRIEN: Well, it's a perennial problem  
23 with this site.

24 MR. RAMSEY: What I'm saying is I think the RAB  
25 needs to decide, you know, on establishing some time.

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1 next RAB.

2 MS. WALLERSTEIN: Just ring the bell.

3 MS. WILLIAMS: I keep forgetting.

4 How about having, if everybody's agreeable on  
5 the community side, of having a separate meeting to get  
6 this and to let -- you know, Steve could come, naturally  
7 Phillip -- well, I don't know if we want David or not.

8 MR. COOPER: Probably not. I'd just slow it  
9 down.

10 MS. WILLIAMS: So that we can actually -- this  
11 is a huge issue to all of us, and let it all hang out,  
12 and we all get the answers that we're looking for.

13 Is anybody and everybody agreeable to another  
14 meeting, just a one-time other meeting for this issue?

15 MR. McLEOD: It should be part of your regular  
16 meeting schedule, not an additional meeting that the  
17 public has to come to because most of these people here  
18 are getting paid, and the public doesn't get paid to  
19 come to these meetings.

20 Another meeting on top of the regularly  
21 scheduled meeting I don't think is fair to the  
22 community. Schedule it to your regular meeting and  
23 really hammer it, just like you said, but keep it on a  
24 regular monthly schedule.

25 MS. WILLIAMS: Ray?

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1 MR. O'BRIEN: Well, I propose that we do what  
2 Dean is saying and put it in the next regular meeting,  
3 and let us postpone Patrick's presentation, but that  
4 also means that what is there for the Litigation Area  
5 needs to be pushed back.

6 Everybody agreeable to that?

7 MS. WILLIAMS: I don't have a --

8 Personally I don't have a problem with it  
9 because I see we have a huge issue here that we need to  
10 act on.

11 MR. SKAREDOFF: Can we push it in a slightly  
12 different way? Can we still have Patrick present on the  
13 Litigation Area and move something else to a later date?

14 MS. WALLERSTEIN: Well, the Tidal Area general  
15 update is the other thing, but that certainly relates to  
16 the landfill.

17 MR. SKAREDOFF: Well, if they're tied in  
18 together --

19 MR. RAMSEY: When I actually read the Tidal  
20 Area, this general update, what I was hoping the Navy  
21 would do -- because we've also had about the same kind  
22 of time to look at this outline and things, and I was  
23 just speaking with Margaret about this. My general  
24 thought would be that the Tidal Area general update  
25 should be either a presentation on the remedial

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1 if you look at the data, you kind of -- you can look at  
2 the data for Site 2, that's essentially the Site 1  
3 landfill.

4 Probably confusing here after a couple hours, I  
5 know, folks, but maybe one suggestion is you essentially  
6 cover the whole four sites and emphasizing the landfill,  
7 then, since that's the Record of Decision that's on the  
8 table right now.

9 MS. WILLIAMS: Igor is next and then --

10 MR. SKAREDOFF: I'd like to make a suggestion.  
11 Use today's agenda as sort of a model for next time. We  
12 have four items in here each about half an hour, 20  
13 minutes each. And I think if we use this kind of model  
14 and say, okay, well, here we have 20 minutes for  
15 Patrick, we have 20 minutes for the Tidal Area general  
16 update, that still leaves us quite a bit of time where  
17 we can still do some --

18 MS. WALLERSTEIN: Well, I might point out that  
19 we started early on the fate and transport. I think we  
20 started about 20 minutes early, and it's now  
21 9:00 o'clock. So --

22 MR. SKAREDOFF: Yeah, but what have we been  
23 talking about? We've been talking about the Tidal --  
24 Site 1. Even during the fate and transport discussion  
25 we talked about Site 1. We need to get the Site 1 thing

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1 investigation that -- the report that we all had just  
2 finished commenting on to the Navy.

3 I don't think that information was ever  
4 presented to this body. What was presented was this is  
5 where the types of data was collected, the details of  
6 the data was not presented to the RAB.

7 So since this revised draft final remedial  
8 investigation for the Tidal Area Sites 2, 9, 11 has been  
9 submitted, it's now been -- it's considered a draft now  
10 by the Navy. So, that last version that was supposedly  
11 the revised draft final is now -- is now a draft. So  
12 the Navy is in the process of deciding about comments  
13 that were raised by the agencies. And we raised issues  
14 regarding data gap.

15 I mean, you can present the data. I think the  
16 best way to present the data on the landfill is really  
17 presenting the data for the Tidal Area sites. So, it's  
18 1, 2, 9, and 11. And maybe that would be the  
19 presentation then. And you could either focus on  
20 Site 1, if that's a -- if that's the higher concern, and  
21 that's probably something because with the ROD, this  
22 Record of Decision, would be focusing on the Site 1  
23 data, but they are all four Tidal Area sites.

24 Again, that's the purple little areas there.  
25 They're all kind of a relatively close proximity. And

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1 taken care of and move on. Unless we actually overtly  
2 go ahead and deal with it it's going to keep coming up,  
3 and we're going to keep having this kind of thing all  
4 the time.

5 MS. WILLIAMS: Do you think we can adequately  
6 solve this problem in one hour? I don't.

7 MR. SKAREDOFF: I think --

8 MS. WILLIAMS: Because of all the questions and  
9 then the answers, I don't think one hour will do it.

10 MR. SKAREDOFF: I think there is a way to  
11 structure this where everybody is limited to a certain  
12 amount of time, and the madam with the bell can konk  
13 them on the head if they exceed that. That includes the  
14 questions and the answers. And I think in that sense we  
15 could move right through it if we structure it.

16 MS. WILLIAMS: Ray, you're next. I'm sorry.

17 MR. McLEOD: Dean. We are different. He's  
18 Irish, I'm Scottish.

19 I don't think it's a good idea to try to  
20 combine all of the wetlands sites because the Litigation  
21 Area -- isn't that part of that?

22 MR. TYAHLA: No.

23 MR. RAMSEY: That's down by the chemical  
24 plants.

25 MR. SMITH: You're just talking about Sites 2,

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1 9, 11, and 1.  
2 MR. SKAREDOFF: Site 1 is the one we care  
3 about, so let's just get it done.  
4 MR. McLEOD: We've learned here today that  
5 every one of these things are site specific. And so to  
6 try to combine discussions of several different sites  
7 that have different land forms, different toxics, I  
8 think it's -- if we could -- I don't know. It seems  
9 like it's far more complicated just to get the one. If  
10 we could just get the one, that would be good.  
11 MR. COOPER: I'm next, but I defer to David,  
12 and then I'll go after David because you've been holding  
13 your hand up too.  
14 MR. GRIFFITH: Thanks.  
15 As for the landfill site, just from listening  
16 to conversations going on, I think there is a -- the  
17 whole question about how to get the last piece of  
18 information would be pretty simple. It sounds like the  
19 decision to put a cap on the landfill has been made with  
20 the groundwater study to follow.  
21 The question that Igor is asking about the  
22 perimeter and the interaction with the surface water,  
23 that's a good question. If you -- during the wet season  
24 if you have the actual surface water coming up and  
25 touching the edges of the landfill, a natural question  
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1 is, how do you keep that water from, you know,  
2 interacting with the contaminants and being pulled to  
3 the surface water? So, it's got to be -- you know,  
4 we're not going to --  
5 You know, Phillip, it seems like you're kind of  
6 hesitant to answer. You're saying that possibly the  
7 water doesn't touch the surface at the site and all  
8 that.  
9 So, isn't it just a -- basically, you know, the  
10 scientists and engineers who are designing the cap, they  
11 obviously have to take that into consideration. So,  
12 wouldn't it be a solution to find out the answer to that  
13 question as to how the cap will be protecting the  
14 perimeter of the landfill if it does, in fact, and then  
15 just pass that information on to the RAB? That seems  
16 that would be a thing that would answer our question, is  
17 the perimeter.  
18 MR. RAMSEY: I guess it is --  
19 Yes, I can answer. I mean, yes, that's a  
20 fairly easy response. I mean, it doesn't meet EPA. The  
21 Navy could respond because it has to do with the closure  
22 laws and how they protect against erosion. And one of  
23 the laws that's in the Record of Decision has to deal  
24 with erosion control.  
25 MR. GRIFFITH: So, there has got to be an  
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1 answer to that. We just don't know what it is offhand.  
2 MR. COOPER: Because it's a design.  
3 MR. TYAHLA: Predominantly it's going to be a  
4 design issue. And how we would word something like that  
5 in the ROD is going to -- you're going to see something  
6 in the ROD. I don't think the ROD is going to --  
7 MR. SKAREDOFF: Again, I'm not looking for  
8 design specific. I'm looking for a design criterion.  
9 You know, one of the criteria is that this thing will be  
10 protected from contact with surface water from the site.  
11 If you say that and that's built into the thing, I'm  
12 cool with that. Leave it to you guys to figure out.  
13 MR. TYAHLA: The table we have of ARARs covers  
14 all the closure requirements basically for the state for  
15 landfill. So Title 27, which I don't know thoroughly,  
16 probably had something in there that you look at the  
17 table, you write up the regulations, probably has things  
18 that defend against that.  
19 MR. RAMSEY: There is a specific regulation.  
20 MR. COOPER: You don't have to raise your hand.  
21 MS. WILLIAMS: I'm polite.  
22 We need to allow our court reporter to take a  
23 ten minute, five minutes --  
24 THE REPORTER: (Indicating.)  
25 MS. WILLIAMS: -- a five-minute break so she  
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1 can get the kinks out of her wrists.  
2 We'll come back at ten minutes after 9:00.  
3 (Recess from 9:03 p.m. to 9:11 p.m.)  
4 MS. WILLIAMS: Okay. Who's the next person?  
5 Steve finished.  
6 Dean, did you have -- I've lost track of whose  
7 hands were up in the air.  
8 MR. COOPER: I think I was the next one.  
9 MS. WILLIAMS: Okay. You're next.  
10 MR. COOPER: We're still in the discussion over  
11 the -- Site 1, how we're going to deal with it. I have  
12 some thoughts about how we might be able to address it  
13 as a process thing.  
14 The first thing is it's not just the issue that  
15 people are now discussing, which is what's the edge  
16 going to look like. There actually have been over the  
17 course of tonight a number of issues raised by Ray, a  
18 number of issues raised by Dean, as well as at least  
19 that one, if not more. So, there are multiple issues  
20 that need to be dealt with in this discussion, not just  
21 the one technical one.  
22 I'm just going to make a suggestion that the  
23 Navy review tonight's record and list all of the issues  
24 raised by everybody about Site 1 so that we're clear on  
25 everything that people have wondered about, everything  
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1 from liquid through the soils that are nearby, all of  
2 those issues that were raised, so we're clear on what  
3 all of them are, and further that the Navy actually  
4 provide a bulletin answer to -- from the Navy's  
5 perspective to what those issues are.  
6 For instance, if there was a question about the  
7 movement of fluids through -- through the soil, the  
8 answer is we looked at the soil, and we think, you know,  
9 liquid -- water moves at this rate or whatever the  
10 Navy's answer would be. So coming into the next meeting  
11 we can already know many of the -- potentially many of  
12 the answers to some of these issues that have been  
13 raised, at least from the Navy's perspective, which  
14 would require the Navy to provide that via E-mail to  
15 everybody in advance. That's half.  
16 The other half is, again, my suggestion that  
17 there be an ad hoc committee formed, which would include  
18 at a minimum Ray and Igor, because you guys have raised  
19 these issues, to talk with Steve or with Margaret or  
20 whomever, some Navy representative, if there are any  
21 additional issues that you can think of that you're  
22 worried about or concerned about related to Tidal Area 1  
23 so we can have the universe of issues before we go into  
24 the next RAB meeting.

25 I would suggest that both of those things occur  
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1 in the interim period. That's my thought. Because  
2 otherwise people keep thinking of new things or keep  
3 going back to old things. So I think we need to work  
4 with the entire universe. That's my suggestion.  
5 MS. WALLERSTEIN: I would like to interrupt  
6 you. Is it okay with everybody we send the court  
7 reporter home? It's getting close to 9:30. She has a  
8 very long drive.  
9 MR. COOPER: You're confusing her with the  
10 other one. She doesn't have a -- you said that she has  
11 an hour and a half drive.  
12 MR. McLEOD: She's in Lafayette or something.  
13 MR. COOPER: I personally think that this is  
14 the most important discussion of the evening, much more  
15 so than the presentations. So I think this is the kind  
16 of thing that needs to be on the record, how we're going  
17 to solve this continuing issue of -- of the Tidal Area,  
18 of Site 1. I think it's the most important thing to  
19 have on the record so that when we're done with it next  
20 time, if we are, we can say here's the record of what  
21 we've done, it's in writing, this is what we agreed to  
22 do, this is what we did.

23 So I suggest that we continue to stay on the  
24 record. That's just --

25 MR. MCGEE: I think we should stay on the  
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1 record too.  
2 MS. WILLIAMS: Okay. Is there a vote? How  
3 many yeas for keeping this on the record? Yeas. We're  
4 going to keep it on record.  
5 Nays?  
6 MS. WALLERSTEIN: It's fine. It's money going  
7 on and on, and she's been here for three hours.  
8 MS. WILLIAMS: She loves us.  
9 MR. MCGEE: I've been up since 4:00 o'clock and  
10 at work too. We're kind of watching the clock here too.  
11 MR. COOPER: I have this idea that I've  
12 presented. Is there some discussion about --  
13 MR. MENESINI: I would like to have a word.  
14 MS. WILLIAMS: Okay, Mario.  
15 MR. MENESINI: I think of the things that I  
16 hear and I think I probably interpret what I'm hearing  
17 is that there are different parameters to the  
18 construction of the dome, the capping, that we don't  
19 know all about. And I think once we have an explanation  
20 of what safeguards you're taking and how the  
21 construction is going to occur, and I think that's all  
22 that needs to happen, and questions concurrent to that  
23 could be raised, but I think the very simple explanation  
24 of the engineering and how the cap is going to be  
25 effective is -- is actually mandatory to moving on.

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1 So I would propose that Steve give us an idea  
2 of how this is going to work and bring unanswered  
3 questions to the construction and the safety of the  
4 capping.  
5 MR. TYAHLA: In general it will be addressed.  
6 Just the question is like how, the details. And I want  
7 to research the ARARs specifically to point out in the  
8 ROD what ARARs are tagging that issue, that kind of  
9 thing. And then the design, you know, is to be done.  
10 MS. WILLIAMS: Igor?  
11 MR. SKAREDOFF: I agree. We don't want to get  
12 into nitty-gritty details of design. I'll say it one  
13 more time. I don't need to know all of the this and  
14 that. What I'm looking for is the design parameter or  
15 the intention that it will be protected from lateral  
16 movement from water.

17 I think the process you described is a very  
18 good one. I don't know if it's really necessary to have  
19 an ad hoc committee. I, for one, don't have anything  
20 that I haven't already mentioned. I think if we --  
21 maybe an easier way to do that would be if someone  
22 thinks of another issue, they can E-mail the RAB,  
23 including Steve, and that would give him a chance to be  
24 prepared to respond to it.

25 And I think the idea of having the list of  
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1 issues and the list of responses in advance is a  
2 wonderful idea because it could really shortcut an awful  
3 lot of stuff during the course of the meeting. Maybe it  
4 will only take ten minutes.  
5 MR. COOPER: I wouldn't hold your breath.  
6 I'd like to also hear from Ray and also Dean  
7 since I've by name called them out as people who have  
8 raised the most issues over time with this, if you're  
9 willing to speak to that.  
10 MR. McLEOD: I like the process, yeah. As to  
11 issues, I've raised issues in the past that I haven't  
12 raised tonight, and I would have to think them through  
13 and try and recall them, and I'd be very happy to put an  
14 E-mail together.  
15 MR. COOPER: To feed them to Steve.  
16 MR. TYAHLA: Well, actually, I think any  
17 comments should be directed toward Margaret, and you can  
18 copy me or whatever, but she's cochair.  
19 MR. SKAREDOFF: Send them to Margaret, and  
20 she'll just send it to everybody so everybody can be --  
21 MS. WALLERSTEIN: Well, I would like to have a  
22 consolidated list, if we don't want to form an ad hoc  
23 committee, but to put everything together in one list  
24 that gets addressed.  
25 MR. BOYER: Put it to bed one time, one time

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1 only.  
2 MR. SKAREDOFF: Have a deadline for getting  
3 your comments to Margaret, and she can consolidate the  
4 list and have that in advance.  
5 MR. COOPER: And the Navy is going to review  
6 this transcript to try to pull all those issues that  
7 have already been stated to make sure that we capture  
8 all of those.  
9 MR. McGEE: Then give us those bullet points  
10 like you said. I like that idea.  
11 MR. SKAREDOFF: Simpleminded.  
12 MS. WALLERSTEIN: And do we want to set a  
13 deadline when everybody should have their comments to  
14 me?  
15 MR. COOPER: Out of respect to you, if nothing  
16 else.  
17 MR. McGEE: Tomorrow at 2:00.  
18 MR. SKAREDOFF: We want to give her time to  
19 consolidate it, and we want to give Steve time to  
20 respond to it.  
21 MR. COOPER: Or whoever is going to respond.  
22 MS. WILLIAMS: Ray, do you have any other  
23 issues?  
24 MR. O'BRIEN: I don't.  
25 MS. WALLERSTEIN: Is January 10th too soon?

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1 What's today, the 5th? Five --  
2 MR. SKAREDOFF: Five days.  
3 MS. WALLERSTEIN: By next Monday, is that too  
4 soon?  
5 MR. SMITH: One week. That's good.  
6 MR. COOPER: Ray, you're okay with that as a  
7 process, though?  
8 MR. O'BRIEN: (Nods head.)  
9 MR. SKAREDOFF: We're talking specifically  
10 Site 1; right?  
11 MS. WILLIAMS: Site 1.  
12 MR. O'BRIEN: So, what, are we covered for our  
13 next agenda?  
14 MS. WALLERSTEIN: Well, who knows.  
15 MR. COOPER: Maybe something on Site 1. It's  
16 just a guess.  
17 MR. O'BRIEN: Well, no. I had proposed  
18 postponing Patrick's presentation in order to  
19 accommodate this.  
20 Do we need to do that?  
21 MR. MENESINI: No, I don't think so.  
22 MR. BOYER: If we get the answers in advance, I  
23 don't think we need to, no.  
24 MR. O'BRIEN: So we have room to talk about  
25 Site 1 and also to have Patrick's presentation, and that

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1 will be it?  
2 MS. WALLERSTEIN: Well, I guess the Tidal Area  
3 general update would fit in with the --  
4 MR. TYAHLA: Just abbreviate where we're at  
5 kind of thing. Like here's where we're at.  
6 MS. WALLERSTEIN: Update Site 1 discussion, and  
7 on the agenda we will still have Patrick's presentation.  
8 I just have a feeling that his presentation on the  
9 Litigation Area is going to take quite a bit of time  
10 because that's a very complicated site, and then  
11 hopefully the Site 1 discussion will go quickly.  
12 MR. SKAREDOFF: Maybe we should do the Site 1  
13 discussion first. No. No. I'm serious.  
14 MR. COOPER: That's cool, if you guys can hold  
15 to your times.  
16 MR. SKAREDOFF: I'm serious. If we set a  
17 specific time, this is how much we're going to devote to  
18 it. If we need more time, we're going to do it later.  
19 Stop at that point, make his presentation.  
20 MS. WALLERSTEIN: We'll give you the bell.  
21 MS. WILLIAMS: I'll bring my stopwatch. We'll  
22 just determine how many minutes.  
23 MS. WALLERSTEIN: Okay. That's fine. All  
24 right. Okay. So we'll do the Site 1 discussion. We'll  
25 put that first on the agenda, and then Patrick Lynch

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1 will have his presentation after the break.  
2 MR. COOPER: And then Steve, that's last.  
3 Steve goes last with his truncated update.  
4 MS. WALLERSTEIN: Mm-hmm.  
5 MR. SKAREDOFF: The reason I suggested that is  
6 I suspect Patrick's presentation is going to generate  
7 questions and comments. I'd rather not push the tidal  
8 thing further down with those.  
9 MS. WALLERSTEIN: Okay.  
10 MR. O'BRIEN: Well, do you want to postpone  
11 Patrick?  
12 MR. SKAREDOFF: No.  
13 MR. O'BRIEN: Okay.  
14 MS. WALLERSTEIN: Okay.  
15 MS. WILLIAMS: Shall we move on?  
16 MS. WALLERSTEIN: Should we skip the project  
17 managers' update?  
18 MR. TYAHLA: They can read it.  
19 MS. WALLERSTEIN: Okay. Do I have a motion to  
20 adjourn?  
21 MR. MENESINI: I move to adjourn.  
22 MR. MCGEE: I'll second that.  
23 MS. WALLERSTEIN: All in favor?  
24 THE BOARD: Aye.  
25 (Off record at 9:23 p.m., 1/5/04.)

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CERTIFICATE OF REPORTER

I, JANINE P. GAMBLE, Certified Shorthand Reporter of the State of California, do hereby certify that the foregoing meeting was reported by me stenographically to the best of my ability at the time and place aforementioned.

IN WITNESS WHEREOF I have hereunto set my hand this 27th day of January, 2004.

Janine P. Gamble  
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