RESTORATION ADVISORY BOARD

Martinez, California

Meeting of February 2, 2004

Reporter's Transcript

NICCOLI REPORTING (650) 573-9339

NAVAL WEAPONS STATION

SEAL BEACH DETACHMENT CONCORD

RESTORATION ADVISORY BOARD

REPORTER'S TRANSCRIPT OF MEETING

February 2, 2004

Martinez Sheriff's Station
1980 Muir Road
Martinez, California

Reported by Janine P. Gamble, RPR, C.S.R. No. 10372

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PARTICIPANTS

COCHAIRS: MARGARET WALLERSTEIN - United States Navy
MARY LOUISE WILLIAMS - Concord resident

RAB MEMBERS:

CHRISTOPHER BOYER - Martinez resident
DAVID L. GRIFFITH - City of Concord representative
ED McGEE - Martinez resident
LAURENT MEILLIER - San Francisco Bay Regional Water (SFBRWQCB) Quality Control Board
MARIO MENESINI - Walnut Creek resident
RAY O'BRIEN - Bay Point resident
JIM PINASCO - Department of Toxic Substances Control (DTSC)
PHILLIP RAMSEY - U.S. Environmental Protection Agency (EPA)
IGOR O. SKAREDOFF - Martinez resident

OTHER ATTENDEES

CAROL ARNOLD - Contra Costa Resource Conservation District
CLAUDETTE ALTAMIRANO - Weston Solutions
HARRY BYRNE - Concord resident
JOANNA CANEPA - Tetra Tech Em Inc.
DAVID COOPER - U.S. Environmental Protection Agency (EPA)
KEVIN CORNISH - Lafayette resident
BRUCE GERSMAN - Concord Transcript
CAROLYN HUNTER - Tetra Tech EM Inc.
CATHY IVERS - Martinez resident
LIBBY LEVY - Agency for Toxic Substances and Disease (ATSDR) Registry
PATRICK LYNCH - Clearwater Revival Company
DEAN McLEOD - CNWLRA
GREGG SMITH - United States Navy
TAMARA ZIELINSKI - Tetra Tech EM Inc.

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MARTINEZ, CALIFORNIA, MONDAY, FEBRUARY 2, 2004

6:30 P.M.

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MS. WILLIAMS: Good evening. Welcome to the Restoration Advisory Board, Concord Naval Weapons Station, Seal Beach Detachment. This is the meeting of February 2nd, 2004.

We'll start out with introductions.

I'm Mary Lou Williams, the community cochair.

MS. WALLERSTEIN: I'm Margaret Wallerstein, the Navy cochair.

MR. O'BRIEN: Ray O'Brien, Bay Point resident.

MR. RAMSEY: I'm Phillip Ramsey with the United States Environmental Protection Agency.

MS. CANEPA: I'm Joanna Canepa. I'm with Tetra Tech. We're a contractor to the Navy.

MR. SMITH: And I'm Gregg Smith, the Public Affairs Officer for the Naval Weapons Station.

MS. WALLERSTEIN: Okay. And how about --

MR. MEILLIER: I'm Laurent Meillier with the Regional Water Quality Control Board.

MR. SKAREDOFF: I'm Igor Skaredoff, Martinez resident.

MR. BOYER: Chris Boyer, Martinez resident.

MR. McGEE: I'm Ed McGee, Martinez resident.

MS. WALLERSTEIN: Mario, it's your turn to introduce yourself.
MR. MENESINI: Thank you.
Mario Menesini from Walnut Creek, Central Sanitation District as well.
MS. WALLERSTEIN: Okay. Can we start over here?
MR. GERSMAN: Bruce Gersman, reporter with the Concord Transcript.
MS. IVERS: Cathy Ivers, Martinez resident.
MR. BYRNE: Harry Byrne, Concord.
MS. BYRNE: Beth Byrne, Concord.
MS. ARNOLD: Carol Arnold with the Contra Costa Resource Conservation District.
MR. COOPER: David Cooper, U.S. Environmental Protection Agency.
MR. CORNISH: Kevin Cornish from Lafayette.
MS. LEVY: Libby Levy with ATSDR.
MS. ALTAMIRANO: Claudette Altamirano with Weston Solutions.
MS. WILLIAMS: Okay. Are there any comments from the public, please?
(No audible response elicited.)
MS. WALLERSTEIN: Hearing none, we'll move on to the next item, which is the agenda approval and

agenda management.
Pardon?
MS. WALLERSTEIN: That's next. You want me to do it?
MS. WILLIAMS: Yeah.
MS. WALLERSTEIN: Okay. The proposed agenda for this evening has been changed from the one that was first sent out. And the major change was to move the TAG presentation to the March agenda and take it off the February agenda. So -- usually the first thing we do is go ahead and approve the agenda for this evening.
So, does anybody have any questions on this?
Okay. Do I have --
Do I have a motion to approve the agenda?
MR. MENESINI: Move to approve the agenda.
MR. O'BRIEN: Second.
MS. WALLERSTEIN: All those in favor?
THE BOARD: Aye.
MS. WALLERSTEIN: Oh, I forgot to say discussion.
Discussion?
THE BOARD: (No audible response elicited.)
MS. WALLERSTEIN: All those in favor, Aye.
THE BOARD: Aye.
MS. WALLERSTEIN: I'd also like to have a vote

to approve the March agenda. And I don't know -- I did E-mail it out to all of the RAB members, and I hope you all had a chance to review it.
MR. MENESINI: I move approval.
MS. WALLERSTEIN: Second?
MR. BOYER: Second.
MS. WALLERSTEIN: Discussion?
MR. O'BRIEN: Is this in lieu of approving the agenda at the meeting, at the beginning of the meeting?
MS. WALLERSTEIN: Oh, yeah.
What I would like to do from now on is at each meeting to approve the agenda for the following month so that if there are any questions about, you know, what's on the agenda or the timing, that we can discuss it ahead of time and resolve them.
MR. O'BRIEN: (Nods head.)
MS. CANEPA: There are copies of this agenda.
MS. WALLERSTEIN: Yeah, I E-mailed copies of the agenda out.
Okay. The next thing, we had a proposed RAB agenda for 2004, I believe at the last meeting. And I E-mailed another copy of the proposed RAB agendas for 2004.
And, as we discussed at the last meeting, the reason that we did this was so that we could take a

long-term view of what's coming down -- you know, what's coming down the pike for the upcoming RAB meetings so that we can plan accordingly and make sure that the RAB is able to have the presentations and information that they feel is necessary. So I E-mailed this out to all of the RAB members.
Does anybody have any questions on it? It looks like this (indicating).
MS. WILLIAMS: Well, this agenda -- it can be modified if the need arises, can't it?
MS. WALLERSTEIN: Yeah. This is -- this is just a planning tool.
And, actually, there are two things that are asterisked on there, in May the Litigation Area Draft Post-Remedial Action Monitoring Plan, and then in June the Litigation Area data gaps technical memo. Those are asterisked. Those are two items that are more likely to be delayed.
And I just intended for this to be used as a planning tool so that as we're deciding, you know, what should go on what agenda, that we see how that affects things downstream.
There are two things that are not on this list. One item is, I understand, I think it was you, Ray, had asked for a presentation on how the Integrated Natural

Resources Management Plan relates to the IR Program, and that's -- that's not on this list.

The other thing that's not on this list is I'm assuming that sometime in late summer to fall time period the ATSDR will issue their draft report on their public health assessment. And I'm assuming that the RAB would want to hear a presentation on that.

But if we have this before us, we can see what our schedules are going to look like and decide which presentations are most important and what you want to hear.

So, does anybody have any questions?

MR. O'BRIEN: So why aren't we putting those two items on the agendas?

MS. WALLERSTEIN: Well, they can be put on, but what would probably -- what we'd have to do is -- well, for example, if you wanted to have them on the March agenda, you know, they probably won't fit there unless you said, you know, we don't want to hear about the Site 13 groundwater work, which I think you do.

But, you know, this is just a planning tool so that anybody who wants a particular presentation, or if we have a lot of documents coming out within a short period of time, the RAB may say we don't need a presentation on this, you know, if you can just provide

us some written information, or maybe it's a smaller thing we can handle as part of the remedial project managers' section of the meeting.

But it's simply a planning tool. There is no magic to something being on or off this per se. But I'm looking -- I just didn't put the ATSDR on there because it didn't really fit anywhere. And I'm sure that -- especially as we get later in the year -- more of those things will change. And at that point when the draft --

I also don't know when the draft report is coming out. It could be anywhere from late summer to -- to late fall. So when we know -- when we have a better idea of when that's coming out, then we can discuss whether we would have a presentation at the meeting, if we felt we needed one.

Are there any more questions?

Okay. Yeah, and I'd like us to vote on this. Not to adopt this, you know, as it is carved in stone now, but that we adopt this as a planning tool for use in managing our future agendas.

MR. SKAREDOFF: Do you need a motion for that?

MS. WALLERSTEIN: Yeah, I'd like to vote on it.

MR. SKAREDOFF: Have we already motioned? I will move that we adopt this forward schedule of agendas as a planning tool.

MR. McGEE: Second the motion.

MR. MENESINI: Okay.

MS. WALLERSTEIN: Mario seconded.

Is there any further discussion?

MR. O'BRIEN: Yeah, I'd like to see these two items that we have no place for listed on a separate list so they don't drop through the cracks.

MS. WALLERSTEIN: Okay. All right. Then I can add on the bottom just a list of things that we're considering or, you know, that need to be fit in someplace.

MR. O'BRIEN: That would be great.

MS. WALLERSTEIN: Okay. With that amendment then.

MR. SKAREDOFF: I'll agree to the amendment.

We need to vote on the amendment now?

MS. WALLERSTEIN: No; I think we can just add it in the discussion.

Okay. INRMP and ATSDR.

MR. RAMSEY: Margaret, can I ask a question about one of these? For June it indicates Site 22 Revised Draft Supplemental RI. Is that actually a presentation on the work plan? I don't believe you're going to have the results. So, that's going to be the RI -- the RI work plan.

MS. WALLERSTEIN: Okay.

MR. RAMSEY: Just, again, we won't be reporting on the results of the sampling yet. It's the plan to do the sampling.

MS. WALLERSTEIN: Right. That's why this is changeable.

MR. RAMSEY: So folks understand.

MS. WALLERSTEIN: Uh-huh.

Okay. Is there any more discussion? Any additional comments?

Okay. All those in favor, Aye.

THE BOARD: Aye.

MS. WALLERSTEIN: Opposed?

THE BOARD: (No audible response elicited.)

MS. WALLERSTEIN: Motion passed.

Okay. That brings us to --

At the last meeting we didn't approve the January 5th transcript so -- oops, I'm reading from the wrong agenda.

Okay. The next -- the next thing is approval of the January 5th meeting transcript.

MR. O'BRIEN: Well, in a discussion prior to tonight's meeting with Mary Lou -- or with Joanna, actually, she said we were not going to approve the transcript because it was only handed to us tonight.

MS. CANEPA: Maybe Carolyn.
MR. O'BRIEN: Oh, maybe Carolyn.
MS. WILLIAMS: It was me, that I was going to --
MS. WALLERSTEIN: Oh, okay.
MS. WILLIAMS: -- to suggest that we don't approve the January 5th meeting transcript because we just got it tonight, so that we will postpone it and put it over to the March meeting, which will give us a month's time to review it so that we can make any comments or corrections and approve it at the March 1st RAB meeting.
MS. WALLERSTEIN: That's right. You and I had discussed it, and that's why it's on the March agenda to approve the January 5th and the 2nd -- February 2nd.
So, is that fine with everybody?
MR. O'BRIEN: Oh, sure.
MS. WALLERSTEIN: Did you make a motion?
MR. O'BRIEN: No. I don't think I need to. That's fine. I just was unclear about that. Okay.
MS. WALLERSTEIN: Okay. And then the next item on the agenda is the bylaws amendment. And this is the amendment I E-mailed out, the same copy that you've seen before. And this is the amendment that removes the requirement for a court reporter -- a court reporter

transcript of each meeting and stipulates that we'll have minutes prepared for each meeting.
So, do I have a motion to approve that amendment to the bylaws?
MR. BOYER: I move.
MS. WALLERSTEIN: Second?
MR. MENESINI: I'll move.
MS. WALLERSTEIN: Discussions?
MR. O'BRIEN: I would like to encourage all of the members to vote against this motion. I believe it's absolutely necessary to have a verbatim transcript of all of these meetings. Secondly, I think it is highly inappropriate for the Navy's contractor to be taking the minutes of this meeting. So I encourage you to vote against this.
MS. WALLERSTEIN: Any other discussion?
MS. WILLIAMS: Carolyn passed out to everybody a copy of minutes from Hunters Point. I don't honestly know what the date was on that. But that is the way that Tetra Tech does their minutes, and it's here for your comparison with our transcript. That will help you see what it looks like, what the content is, is this format with the amount of information sufficient, do you want more information in the minutes, do you want less? This is just a little more of a tool to help people make

up their minds.
MR. SKAREDOFF: I guess I had a question about the process we would use with these non-verbatim minutes if we adopted them. If someone challenged something that was in there, what would be the procedure for addressing that?
MS. WILLIAMS: The meeting is being tape-recorded. So if there was a challenge or a question as to something in the minutes, or that isn't in the minutes, refer back to the tape recording.
MR. SKAREDOFF: So we'd have summary minutes, if you will, or edited -- edited minutes and the verbatim recording, tape-recording?
MS. WILLIAMS: And what was your suggestion, Margaret, to go beyond that?
MS. WALLERSTEIN: We can tape-record the meeting, but we can also do a digital recording, which might be more convenient so that, for instance, if you wanted to listen to the recording of the meeting, we could just E-mail you a voice file and you could listen to it. So, it would be readily available.
MR. SKAREDOFF: So, anyway, it would be voice recorded?
MS. WALLERSTEIN: Yes.
MR. SKAREDOFF: So we'd have a voice recording

and we'd have --
MS. WALLERSTEIN: Minutes.
MR. SKAREDOFF: -- minutes that are not verbatim?
MS. WALLERSTEIN: Right.
Well, you have a copy of the Hunters Point minutes. And the minutes also would be similar to -- to what you get from the RPM meeting minutes now, you know, captures the discussion and the decisions and the action items.
MR. MENESINI: I've certainly had no occasion to refer back to the verbatim minutes in my experience so far here.
And, Ray, do you have something that --
MR. O'BRIEN: Well, I have actually referred back to the minutes and -- actually in a RAB meeting, subsequent RAB meeting.
I also find the index in the back to be highly useful to zero in on certain things that I would like to research. And I would think that with a tape recording it's going to be a lot more difficult and involve a lot more time on our part. So I see a real value to verbatim minutes.
MR. BOYER: Can Tetra Tech run an index of the minutes?

MS. CANEPA: I would imagine so.
MR. BOYER: I think Word does that. So, we could solve that part by doing that.
MS. CANEPA: Yeah, I don't -- it wouldn't be the same as, obviously, the transcript. It wouldn't capture every word. So if that's what's being looked for, it wouldn't serve that function.
MR. O'BRIEN: I would like to point out again this is being filtered through Tetra Tech. It's not the actual transcript.
MS. WALLERSTEIN: Is there any more discussion? Are we ready to vote?
All those in favor, Aye.
BOARD MEMBERS: Aye.
MS. WALLERSTEIN: Opposed?
MR. O'BRIEN: (Raises hand.)
MS. WALLERSTEIN: Motion carried. Okay. That --
Well, the next item on the agenda is break, but it's very early, so we should continue with the committee reports and announcements.
Do we have anything on the RAB report?
MS. WILLIAMS: I don't have anything.
MS. WALLERSTEIN: That brings us to the remedial project managers' update. So you guys get lots

of time tonight.
MR. RAMSEY: What happened to Site 1 ROD comments?
MS. WALLERSTEIN: That's -- that's next. Site 1 ROD discussion is last on the agenda.
MR. RAMSEY: Is this the old one?
MS. CANEPA: Yeah.
MR. RAMSEY: Okay. That would help.
Excuse me. Do you want EPA to report first?
MS. WALLERSTEIN: Sure.
MR. RAMSEY: You're looking at me, so. . . .
Well, I was actually planning to be brief this evening, and I'm sorry that evidently now there's all this time to talk, and, gee, I don't have any song or dance or anything organized for anybody.
Real fast, this month, I was looking back at my calendar --
Are you going to go through Steve's, Margaret, on his update or --
I typically follow the Navy to really explain things, but I could elaborate. And I guess folks have gotten Steve's written RPM report for everybody.
MS. WALLERSTEIN: Yeah.
MR. RAMSEY: Just real quick, for this month --
I mean, what I typically do for people, you

know, announce -- let them know what we've been working on here for this month and what kind of issues we've been dealing with.
We started this month with -- about three days were spent with -- we had Libby --
MS. WALLERSTEIN: Levy.
MR. RAMSEY: -- Levy with the -- she mentioned her agency, Agency for Toxic Diseases and Registry, ATSDR. We were with her about three days the first full week in January. We had meetings with the Navy and EPA. the State was there, to inform the Navy of all the health issues for Concord.
And we had a site tour on the 6th, and then there was a debriefing that happened on the 7th. So we spent, you know, a fair part of that week traveling around the site and having some interactions with this Agency for Toxic Substances and Disease Registry.
And we had an RPM meeting on the 14th. EPA issued a letter to the Navy on the 13th that was invoking informal dispute on Site 22, which is now --
Folks can look on the map. Site 22 is right down on the border of -- the Concord Dana Estates neighborhood border. You can see a small Site 22. This site has now expanded into approximately 500 acres and encompasses the main Magazine Area of the Inland Area

where we are looking at a number of issues.
One is the effects of the Navy possibly pesticide applications that we see an elevated arsenic concentration in the soil. So we have been reviewing a draft final sampling plan that we received in December per the FFA for U.S. EPA. We have a draft final document. If we have a problem with it, we have a dispute mechanism, and so U.S. EPA invoked that dispute mechanism.
And what this letter does, that we had written to Steve and to the Navy on the 13th, extends the informal dispute process. We're allowed to talk more about what the aspects or the concerns we had with that sampling plan.
And we did have a meeting with the Navy on the 21st of January. And I believe we're still waiting -- I'm not sure if the Navy has sent us something, but we'll be expecting something soon from them to see if they --
In general the meeting was actually very productive. We thought we had reached resolution on the issues that concern EPA, and I believe the State also had with the sampling plans. So now we're waiting for the Navy to put their documentation -- you know, put their response back in writing to us, and we'll take a

look at that.

But generally the meeting was very productive, and we think the Navy got the concerns we had. So we're hoping to -- for a favorable response from the Navy on the work that needs to be done.

And perhaps -- I don't know how -- it would be nice if we can brief the RAB on what those decisions -- what the sampling plan will be, but I guess that's actually what we just talked about for June now is a more elaborate discussion on what the sampling plan is going to be for Site 22.

And then toward the end of the month the Navy is doing some fieldwork in the Solid Waste Management Units. These are right near the base entrance, you can see, between the Tidal Area and the Inland Area.

Real fast here, excuse me, folks. The SWMUs sites are -- these are all -- the core of the facility is here, the administration, there is maintenance buildings here. This is where the SWMUs sites are, again, Solid Waste Management Units. It's an RCRA term, Resource Conversation Recovery Act of existing hazardous waste or solid waste sites. It's an RCRA term.

But these maintenance facilities -- the Navy is doing some additional soil gas work. And so they were out there the 26th. The 27th we went out to see some of

the soil gas sampling being done and to have a little input on some confirmation samplings that are being done.

And there was also a lot of discussions. EPA -- just to conclude on the -- kind of the segue to the Site 1 ROD, EPA has had some discussions with both the Navy and we've been having internal discussions on the final modifications to the Site 1 Landfill -- Tidal Area Landfill Record of Decision.

And so we have had some discussions with the Navy and, again, we've been having discussions internal and all the way up to EPA headquarters on this, some changes the Navy is proposing on the Record of Decision.

And that about does it for EPA for January. Thank you.

MS. WALLERSTEIN: Thank you.

Laurent.

MR. MEILLIER: Okay. I guess to add to what Phillip just stated, the Board met with the Navy as well as with regulators on January 14th, and the Board stated during that meeting that they recommended that the Navy sample for arsenic in the creek and at Site 22 in the groundwater to see if there is any potential contamination of arsenic in the creek emanating from the general area of Site 22. And, also, the Board

recommended that emergent chemicals be sampled in the groundwater as well.

And on that same meeting the Board was -- Board staff was pleased to learn that the Navy decided to include two new statements in their -- in the Site 1 ROD, one of them being that they are -- they will be characterizing the hydroconductivity of the native geologic material, and the second being that they are going to include gas monitoring and gas venting wells.

And then during that same meeting the Board also recommended that the Navy sample groundwater at Site 29 for TPH, BTEX, PCB, and chlordane.

I guess to add a little bit more about what the Board -- what kind of meetings the Board has attended, the Board staff attended a UST RPM meeting on January 23rd, 2004 where the Board requested that Jerry Fee, which is a consultant for the Navy on nondissimilar USTs, draft a schedule for his work and their work on UST sites.

And Board staff also discussed geomagnetic characterization of the UST sites -- potential UST sites at Site TT-20, and we also discussed products -- TPH product removal from the pipeline, that being a former UST aboveground storage tank, to a facility that was providing heat in terms of steam heat.

And then in terms of correspondence, Board staff reviewed UST meeting minutes and then Navy response to comments on four reports that the Navy had forwarded to the Board, and Board staff also reviewed the proposed changes to the ROD, and reviewed the responses to comments on the proposed monitoring plan for the Litigation Area.

That's about it.

MS. WALLERSTEIN: Okay. Well, I guess both of -- of you have hit all of the highlights. And there are a few other items about the Navy issuing some letters that are on the list that I'm sure all of you can read.

Well, that brings us to 7:00 o'clock. I was going to suggest that we go ahead and have a break.

Did you have a question?

MS. WILLIAMS: Well, I was just trying to -- so that the reporter has a break, you know, at about the hour time. So I thought as long we're running ahead of schedule, we could do the executive session now. We can go out in the hallway, because there is fewer of us than everybody else, and we can take care of that, and that will give her a break. And then we'll be back -- we'll be back long before 7:30. Then we won't be too far off the agenda time.

MS. WALLERSTEIN: Okay.
MS. WILLIAMS: Is that okay?
MR. O'BRIEN: Sure.
MS. WALLERSTEIN: Okay. So we're adjourning to executive session now. We do have an application from a member of the public to become a member of the RAB, and we'll be adjourning to executive session to review the application.
MR. SMITH: Could we give a general time when you think we'll be reconvening, for the folks in the audience?
MS. WALLERSTEIN: Well, I don't think it should take more than a few minutes.
MR. O'BRIEN: So we'll have time for a break?
MS. WALLERSTEIN: Yeah, we'll come back, have the break, and then do the Site 1 discussion.
MR. O'BRIEN: Okay. What time?
MS. WALLERSTEIN: If we take, let's say, 10 minutes for executive session and we're back here at 7:15, 7:20, we'll just go ahead and take the break at that point and then do the Site 1 ROD.
MR. COOPER: Around 7:30, then?
MS. WALLERSTEIN: Yes, we'll reconvene about 7:30.
MR. COOPER: Okay.

(Recess from 7:02 p.m. to 7:26 p.m.)
MS. WILLIAMS: Okay. We're back in session. I'll make the announcement that the applicant for a community RAB position was unanimously approved. And his name is Gregory Glaser, and he will be at the next meeting.
MR. MENESINI: He's in France now enjoying his honeymoon.
MS. WALLERSTEIN: Yes. Yes, he just got married.
And I guess while we're on personal announcements, we're eagerly awaiting the birth of Steve Tyahla's first child, whose arrival is overdue and imminent, we hope.
Okay. So the final thing on the agenda is the Site 1 ROD discussion. And as you all recall, a little review, at the last meeting some questions came up about the design of the landfill cap. And we had a rather lengthy discussion about it, and there were some public concerns raised. So we had requested that anybody who had comments would E-mail them to me, and we would respond to those comments in writing and have a final discussion on those comments at this meeting. So --
Well, I did E-mail out the response to comments to everyone, but if you don't have them, there are

copies in the back.
MR. SKAREDOFF: At which point in this would I make my presentation, Margaret?
MS. WALLERSTEIN: Okay. Well, what I'd like to do is have -- we weren't going to do a big presentation but a short introduction by Tamara, I think you met her, from Tetra Tech. I was going to ask Joanna to introduce her.
MR. O'BRIEN: Before we continue, I would like the LRA consultant to make some formal comments on the subject regarding this.
MS. WALLERSTEIN: Okay. Would you like to start with your comments and then have Tamara follow up, and then perhaps she can answer your comments?
MR. SKAREDOFF: Okay. Works for me.
MS. WALLERSTEIN: That's fine.
MR. SKAREDOFF: Technology is our friend after all.
All right. Last time we had a little meeting we had a little discussion about this, and I was trying to get a point across about what I'd like to have the goal of this step in the process to -- to have incorporated as part of its purpose. And so, it wasn't really happening, and, evidently, my verbal communications weren't quite getting across, so I made

this little written thing here.
And just for all of us, so we're clear on where we are, this is the sinuous CERCLA process where you start out with figuring out where you got a problem, and where you got it solved over here. And where we are is right here (indicating). We're at the point of the Record of Decision -- making the Record of Decision. We're trying to decide what the problem is and in general what we're going to do, what the solution ought to be, and then from that the next step would be to actually design the solution.
So we don't really have -- at this point understand all of the details about exactly what the solution is, but we do have to be clear on what we intend to accomplish by having the solution. So, that was my --
Here's my real complicated diagram here, okay, where you've got whatever it is underneath there, and you've got groundwater, and you've got Bay mud. And on top of that you plunk an inch of surface water there, because this was a wetland initially, and then you put a landfill on top of that. The landfill deforms the Bay mud a little bit, so it has a little bit of an indentation down below it. And -- okay.
And the landfill's got stuff in it. Some of

it's good, some of it's not so good. We don't really know what's in there, and we don't really intend to try to -- to go to a lot of effort to try to figure it out for a number of reasons.

One of them is it's considered heterogenous. So if you sink some wells down in there, you might get something and think you got a whole bunch of something or you've got a little bit. You might miss something that's critical and might mislead yourself that way.

And the other thing would be if you were to dig it up, since we don't know what's in there, we might expose people to something that we don't want to expose them to. So we have a variety of things. We're not sure exactly what they are.

Well, one of the things that happens is that it rains, and then the vertical arrows here show the rain coming down and penetrating through the landfill, and they come down into the surface water. And so, that's what we have at present with the un- -- unremediated landfill. So we got infiltration going on.

The other thing we also have is we've got -- since it's sitting in water and the water sometimes comes up, sometimes goes down, the water can come in from the sides and then could recede from the sides, so it can leach stuff off the side as well.

So here's kind of what I just tried to say. So I guess the idea was that -- also, excavation and removal of this was not considered to be the best choice because digging stuff up might risk exposure that otherwise wouldn't happen. And so the direction of the Record of Decision of choice is going to encapsulate the landfill.

Okay. So put a cap on it and put several layers of different kinds of materials on there so that the thing has a cap on, it and so then you don't have any more -- if the water comes down from the top, it just runs off the sides and goes off like this (indicating).

Well, my concern was that since it's sitting in water, I wanted to have some sort of mechanism in place to keep this sideways motion from happening. So, what I would like to see is a lateral barrier put in of some sort so that we don't have this lateral movement anymore.

So now we have -- the whole thing is contained and it sits there where it's sealed against the Bay muds, which is, I understand, pretty impervious. You've still got a pocket of water that's preexisting in there. I don't know whether we really think we ought to pump that out or not or whether just leaving it sit there is

okay. I don't have a lot of heartburn response about it too much one way or the other. So we have something like that in place, I'm okay with that.

So these are the objectives: protect against leaching of the unknown but suspected contents, and then to protect against lateral inundation, and some kind of protection that if the system fails, that we have something in place so that -- prevent it from failing or to let us know that it has failed.

While I was at Mare Island for the Fly-Away Festival, I had a conversation with a RAB member from Mare Island, and they pointed me to this document here. This is the Mare Island Groundwater Containment Barrier and Extraction Trench Investigation of Area H-1 Interim Remedial Action Plan. Basically it's their landfill issue.

Now, their landfill is different from ours. They've got known quantities of waste oil there, much bigger and so on, but there is also some similarities in that it's sitting in the landfill -- I mean, in a wetland. So here's another page from that.

What they're planning to do is they're planning to put a -- what you call slurry filled trench around the boundary of it. And so the trench -- they make the trench, and then they make a slurry out of Bentonite

clay. It makes a fairly impervious barrier to keep stuff from moving back and forth.

I'm not advocating we have to have a trench; I'm just saying, you know, protection against -- lateral movement is a known thing that occurs. This is what they're planning to do there. They're going to have this Bentonite clay trench, and inboard of it they're going to have another trench where they're going to extract the water from there and remove it.

And, again, you know, they've got a different situation. I'm not necessarily saying we have to do that, but I think it should not necessarily be ruled out as an option. So, that's a little close-up of what they're doing over there.

See, they've got this pocket of water in groundwater level, so they're going to be pumping it out to remove the stuff. Now, theirs is only an interim landfill. They say they've got a real serious problem. They don't want to be waiting around until a final decision gets made and have all this bad stuff still going on, so they're going to do this first. And then while this is in place, kind of holding things in position so it doesn't deteriorate, they're going to try to find out what the final solution should be.

And I guess I took some meaning from that that

we have a potentially similar situation here. We're to the point where -- maybe get to an impasse on what the final solution ought to be. At least we ought to be able to reach an agreement on what kind of interim holding -- holding position just to keep things from continuing.

This is straight out of their thing -- their fact sheet, "The objective of this interim remedial action is to contain these potential sources of groundwater contamination and to prevent the lateral migration of contaminants into the adjacent tidal marshes and wetlands."

And basically if we have that kind of a statement in our Record of Decision, I'm okay with that, to leave the rest of how we actually do that to the next step when we actually -- when we're doing the design.

So, that's what I would like to recommend for us to do.

Thank you.

MR. MENESINI: I would like to once again point to our landfill just adjacent to Martinez up the highway that was closed and is -- also has a cap over it. And there are many acres of land there. And they have a trench at the base of that cap, and it is like that moat that Igor just described, and there is no water

interfacing from the Bay into that landfill. So I think it's a good job. We ought to take a look at it.

MS. WILLIAMS: Igor, when they pump the water out, where does that go?

MR. SKAREDOFF: Well, the main thing they're trying to remove in that particular case is oil. And so they skim the oil off, and then they -- I think they also adjust the acidity or base acidity of the water because I think there is batteries buried out there as well. So they neutralize it, and then I think they do some testing before -- just like any other kind of a point-source release has to make sure it's still suitable, and then they release it out to the Bay.

No. No, they don't. They put it to their affluent treatment facility.

MS. WILLIAMS: Then it goes to Mario, huh?

MR. MENESINI: Yeah; we do that, incidentally.

MR. SKAREDOFF: It's a Mare Island affluent treatment plant, so they don't take it to Mario.

MS. WILLIAMS: Rats.

MR. MEILLIER: In terms of the water there, like -- for like metal and the other constituents and motor oil, do they like --

MR. SKAREDOFF: I don't know. I don't think they specify it in their fact sheet. I guess whatever

their treatment facilities had to meet as criteria, I guess, is the class.

MS. WALLERSTEIN: Okay. Do you want to have Patrick address it and then we'll follow up with Tetra Tech?

MR. LYNCH: Igor's comments, I think, are very good and the solutions --

MS. WALLERSTEIN: Can you introduce him for people so they know who he is?

MR. O'BRIEN: We have a group that has a TAG Grant from the Environmental Protection Agency, and we've been able to hire Patrick Lynch as our independent consultant. And he has provided some comments to the Navy, and they have responded back to him, and now he's going to make some further comments on those responses.

MR. LYNCH: Again, the installation of cutoff walls and extraction trenches at the Tidal Area Landfill, my concern with installing the cut-off wall is that the Bay mud provides a very poor foundation. And so, it's usually -- you're required to excavate the wall deeper than you would have to do to simply protect the groundwater because you've got to get down into some soils that can actually support the weight.

The last time I was involved in a -- a project building a soil Bentonite slurry wall was the San Jose

Arena. And at that time the slurry wall costed about $80 per square foot. And if we apply that number to the landfill here, we're going to come up with a cost for installing a slurry wall of about 7- to $8 million.

And so, again, we're -- we're looking again at excavation and off-site disposal being a more cost-effective alternative.

The other issue is the extraction of groundwater. One, it requires the installation of a trench, which is going to produce all the soil that's excavated to install it, but the second problem is -- is actually the treatment of -- of the groundwater. It contains metals that exceed the limits for discharge into the Bay, and it contains 30,000 parts per million of dissolved solvents.

So those dissolved solvents compete with the metals. So every time you go try to remove these metals to low enough levels to discharge into the Bay, you end up having to remove a substantial quantity of the dissolved solvents. The treatment costs are -- are extremely high, and you end up with a -- a waste stream that requires some other method of disposal.

And my experience in trying to treat a site very similar to the Tidal Area Landfill that had a cut-off wall installed around it and the traction

trenches, we couldn't get someone to accept that water because the sanitary sewer district had -- reclaimed the water for irrigation uses, and the dissolved solvents was -- was a problem for them because it made it more difficult for them to market the reclaimed water.

So, again, there are good ideas. We definitely -- you know, if we're going to contain -- if we're going to use a containment remedy for the landfill, that is what would need to be done. But I think if we, you know, again, look at that as an alternative, we're going to find out that the costs are, you know, more than they would be if we simply just excavated the landfill content and disposed of them off-site.

After my presentation, or I guess it was actually the responsiveness to comments on the Record of Decision, I've gone through and looked at some of the responses to the concerns that I raised and that were part of my presentation in November.

One of them is the Navy contends that the California Toxics Rule is not an ARAR for the landfill. And the California Toxics Rule contains a specific provision about wetlands in Suisun Bay. And that was the provision, I think, that is applicable to the wetlands adjacent, and it's something that seems to

require that tidal flow restrictors be removed because the Navy has documented an increase in soil salinity in the area.

A large portion of the wetlands is devoid of plants. And so, it appears that this is a case where the water quality in that particular Site 2, the wetlands adjacent to the landfill, doesn't meet the criteria of the California Toxics Rule. And -- and, again, removing those tidal gates will change the limited understanding already of surface water and groundwater interactions around the Tidal Area Landfill.

MR. SKAREDOFF: Pat, just to make sure I'm clear, Site 2 is adjacent to -- to Site 1?

MR. LYNCH: It's the wetlands area.

MR. SKAREDOFF: And it's blocked off from tidal influence?

MR. LYNCH: I mean, obviously water gets in, but there is a -- a tidal flow restrictor. So, it's not completely natural tidal flow.

MR. SKAREDOFF: So I guess what I'm hearing you say is because of that the salts are built up there through evaporation or --

MR. LYNCH: You know, again, I don't know if that's what's causing it, but there is a document that was prepared as part of the -- the investigations in the

wetlands area where they actually did some radioisotopes of oxygen and hydrogen, and using the different proportions of those isotopes they concluded that water is infiltrating -- you know, salt water is infiltrating into the soil. And that was one of the conditions in the -- in the Cal Fed, or California Toxics Rule, that an increase in salinity -- soil salinity should be prevented.

MR. SKAREDOFF: Okay. So if you were to open the restriction, the movement would go back and forth.

Would that prevent this from happening?

MR. LYNCH: It very well may.

MR. SKAREDOFF: I see.

MR. LYNCH: The other issue, too, with the containment diagram that was presented is -- is what's happening on the bottom of the landfill. Currently the Municipal Landfill Standards require that not more than one foot of leachate be allowed -- or one foot of liquid be allowed on the bottom of a landfill. And commonly landfills are -- plastic liner beneath them, and it's contoured with collection pipes and drain pipes to remove liquid to prevent that more than one foot of liquid from building up.

What is unclear, again, the site I worked on in San Rafael, Bay mud, slurry wall, it was a field site on

an old wetlands. When we dewatered the site, we -- most of the flow was -- that we removed -- it was a ten-acre site, and basically once we dewatered it, we had to remove about five gallons per minute to maintain dewatering.

And most of the leachate was not actually water that was coming up through the cutoff walls; it was actually water that was coming up through the Bay mud. And so depending upon what the groundwater elevation is above that Bay mud, it's determining whether water is essentially leaching down or basically the deeper water is moving up.

The measurements in the nested well pairs where we have a deeper well and shallow well compare the water elevations to determine whether it was -- is going up or down. All of the measurements that have been taken in the Tidal Area Landfill show that water is going down.

One of the things I pointed out in my comments was that one of the calculations presented in -- I guess it was the Technical Memorandum about the groundwater in the Tidal Area, that the calculation's done incorrectly.

The response I got from the Navy was they double-checked it, and it was done correctly. It is not done correctly. They used water level measurements from the wrong well. And if you use the water level

measurements from the correct well, you'll see that the water is actually infiltrating.
The other issue was that --
MR. SKAREDOFF: I'm sorry. I'm still --
When you're talking about the other one you did in San Rafael --
MR. LYNCH: Right.
MR. SKAREDOFF: -- where you found there was actually water upwelling as you were pumping it out, I guess what I'm trying to make sure I hear right is that the Area 1 here, or Site 1, the well data that you're referring to shows that the water is not upwelling, but it's actually going down?
MR. LYNCH: Going down, correct.
MR. SKAREDOFF: If that was to be pumped out, what would happen then?
MR. LYNCH: If you were to actually --
You know, if you lower the groundwater table, for instance, if you were to extract groundwater from actually within the footprint of the landfill, and you actually reduced the groundwater elevation by several feet, then you're going to end up reversed, where water would flow back up.
MR. SKAREDOFF: Would water still be in contact with the contents of the landfill?

MR. LYNCH: Correct.
And the other issue -- and this was in response to comments you and Ray submitted, one of the purposes, they said, of basically keying the cap into the marsh surface was to prevent exfiltration of water. So, that what you were describing that would -- would basically contain the landfill caps. The water has to go somewhere. And the way that the landfill was currently set up, you actually have one elevation that's about ten feet high where there is a roadway, and then you have the other portion of the wetlands down here. So, it's got to be very -- you won't be able to key the cap in on the other side. You'll still have lateral movement over a large portion of the landfill.
You know, one of the things I think that was in response to your comments that was also pointed out is that a substantial portion of the waste will be excavated to re-create the landfill. Right now it's basically -- it has a flat slope, and its final design will have a slope somewhere around three percent. And so at some point in the landfill the height is actually going to increase by about six feet from where it's at presently, and some of that material will come from the removal around the edge of the landfill to obtain that -- that grade. So, there will be a lot of material -- a

lot of waste material that's excavated.
I estimate it's about four acres of the landfill that will be disturbed, and most of it will be disturbed around the edges. So immediately adjacent to the wetlands, immediately adjacent to the roadway.
MR. SKAREDOFF: What portion of the total area is that?
MR. LYNCH: It's about one-third.
The other issues were I pointed out some pH data from the wetlands where the pH was measured at less -- less than 4, I think the actual measurements are 1.6, 2.5.
The Navy said they were not able to find that data anywhere. Well, it is on page 517 of the Site Investigation Report, and it was taken at Tidal Landfill surface water location No. 1. So, there is some evidence of an impact in the wetlands that appears related to the landfill.
The other concern was about the disposal of Otto fuel. The Navy provided an explanation of how this fuel was managed after the landfill was closed. My concern is how that waste was handled when the landfill was operating.
And we do have a component of -- a degradation component of Otto fuel that's detected in two of the

Site 1 monitoring wells. It's also found in groundwater in the Site 2 as well as sediment and surface water. So, there is some evidence of that military specific waste that's supposed to be given special consideration.
MR. MEILLIER: What is the name of the degradation product?
MR. LYNCH: It's very similar to the component, it's N-nitrodiphenylamine. And the actual component is -- of the Otto fuel is 2-nitrodiphenylamine.
So, again, that's really what my concerns are, are that there are data that are part of the administrative record that seem to contradict the responses I got to some of the concerns I raised.
And, you know, again, I think that the -- that if you look at these issues a little more carefully, and if you take the big picture, that installing a cap is not in any means going to solve the site, that there is going to be a groundwater alternative.
And I think it's better to consider those two alternatives together because, again, if cutoff walls are determined to be installed, then you can actually take the material that's excavated in construction of the cutoff walls and incorporate it into the landfill as foundation material. Extraction trenches, the same way.
However, if you're going to wait until the cap

is already completed, then you basically have nowhere to dispose of any of that material that gets excavated.

And I think, you know, there are some -- certain reasons that I think it would be prudent to do a better job of analyzing off-site disposal rather than simply size -- size or volume as being impractical because, again, I think the cost of, you know, the construction of some of these alternatives to contain it and alternatives to address groundwater contamination may really far exceed the cost of simply excavating the entire landfill contents.

Yes, Dean.

MR. McLEOD: How does the non-technical person who's a resident come to any conclusion about what it would cost, what --

You know, who's right here? The Navy says it's a lot cheaper to put the cap on, and you're saying no, those things are wrong, that it's cheaper to haul the material away. How do we -- how do we reconcile the math?

MR. LYNCH: Well, I mean, one of the problems with being able to do that is they cut the site into two pieces and are addressing groundwater separately. Unless there -- there is some idea of what the cost to -- to actually perform groundwater remediation is,

then it's very difficult to -- to make an argument.

I mean, right now it seems -- what I see is it's -- from a cost perspective it's -- they're essentially going to probably end up costing about the same order of magnitude, you know, same -- same amount once -- the cap and the groundwater remediation are going to probably cost as much as just doing off-site disposal.

So I don't think cost is the issue. I think you really need to, you know, look at what's -- what's -- what are some of the environmental impacts of basically excavating the material. We've heard that people don't want to see all of these trucks go through their neighborhood, but you also have to -- you know, people don't want to see this -- this landfill scarring the landscape for the next 200, 400, 500 years. So. . . .

MR. McLEOD: Well, I've been living there for a while, and a lot of people have been living there, and they've been running trucks through the neighborhood for 50 years, and generally it's a lot worse than the landfill.

MR. LYNCH: And, you know, they're going to have to import a considerable volume of soil too. I think the latest estimate was 60,000 cubic yards, which

is about a half a landfill content. So you've still -- you've got half the trucks, even if you're installing a cap.

ATTENDEE: Where does this contaminated soil go?

MR. LYNCH: The samples that have been taken from -- from -- of the actual landfill contents, most of that material could go to a -- a class II landfill. So, it doesn't have to go to a hazardous waste landfill. It can go to -- what is it? I'm not sure what the Contra Costa County landfill -- something Canyon, I believe.

MR. O'BRIEN: Keller.

MR. LYNCH: Keller Canyon. They probably already accept material -- contaminated material from gas stations and may very well be able to accept this material.

And you also have the opportunity that when you do the excavation to use some on-site field instruments and be able to screen the material. And so if you do find something that is apparently heavily contaminated, you can segregate it and actually dispose of that at a more secure landfill.

MR. BOYER: Question for Phillip or Laurent. The California Toxics Rules, does EPA or the Board have any view on whether that applies here or not, and have

you guys reviewed that? Do you believe it applies?

Suisun Bay goes over quite a ways. Does the California Toxics Rule apply here?

MR. MEILLIER: It's a very good question, actually.

You want to answer it, Phillip? You want to give your opinion; I'll give mine?

MR. RAMSEY: Well, I would be happy to, I guess, give you my two cents anyways, kind of off-the-cuff response.

Right now we're looking at -- I mean, it's a terrestrial habitat, so there's issues about salinity underneath it. What's really at issue is not Site 1 for this increased salinity, it's the adjacent site, Site 2, which is the R Area disposal site.

So, that may apply to this site, but I think the Navy has a response to the issues as far as opening the tidal flows to Site 2. We've actually had discussions with the RAB. I had a personal discussion with the former late cochair of this group a year or two ago about that issue. It involves an endangered species out there, which I think is going to complete the -- this restoration concept.

Again, Site 1, it's a salinity issue where we're dealing with a terrestrial landfill there. We're

supporting the Navy's proposal to comply with the closure laws, capping the soil.

MR. LYNCH: And in bringing that up, it was that --

MR. BOYER: This is the first time I've heard of it. That's why I asked.

MR. LYNCH: I'm just saying that if they changed the way that the surface water flows in that Site 2, it will affect the flow in and out of there. So, what they're -- what the Navy's understanding is right now of the -- the surface water and groundwater flow directions would change, you know, you change the flow.

But, you know, that's something else too. I was kind of disappointed when I got a copy of the Tidal Area groundwater sampling that was recently done that they did not take the opportunity to go and measure the vertical gradient between -- they have two sets of nested wells, and they didn't take the opportunity to go out and measure the groundwater elevations in both of them so they can again reestimate that vertical gradient. So, that was a disappointment.

MR. MEILLIER: And then just to give the Board's position on that -- sorry.

I mean, actually, there's been a discussion

that's been ongoing between me and my supervisors. There hasn't been really a strong consensus on that response. One -- one interpretation -- one strong interpretation, in order for us to be able to apply the CTR, we need to prove that there is discharge of groundwater into surface water.

And, you know, it's probably pretty physical for -- for the case because there is probably strong interaction between the two. And so, therefore, you know, if -- but at the same time it would kind of -- so that's why we -- you know, if we applied it this way, would be applicable.

At the same time there is also a conflicting issue, which is we never really applied it in that type of environment or that type of case. We apply usually for permitting or things like that.

And then the third issue is the fact that we need to -- we haven't yet decided what kind of criteria that would be applied to -- to leachate -- contaminant of concern that are found in the leachate of Site 1 landfill.

And one criteria that comes up to mind would be basically the criteria that would be protective of ecological health there. And for us to do that we would need to have an ERA done basically on the landfill to

make sure that the contaminants that are found within the leachate meet -- you know, meet those criteria and that the animals are not detrimentally affected by the leachate.

But we don't have that data. We only have an ERA on Sites 2, 9, and 11 so -- so, therefore, it's -- you know, that's another avenue which would be -- and this is -- you know, these are very premature discussions, but which would be making sure that any contaminants that are found in the leachate have been integrated with- -- integrated within the ERA of Sites 2, 9, 11 and that we have a good understanding out there.

MR. BOYER: Okay.

MS. WILLIAMS: Does anybody else have any questions based on the report we got from the comments that were submitted by RAB members, or any other questions?

MR. SMITH: Mary Lou, Dean does.

MR. McLEOD: Okay. We've discussed this, and we've gone around, and it looks like it's still not resolved. So, what's the next step in this? Is the Record of Decision going to be published and we're going to move ahead anyway, or are we going to continue discussing it?

MR. SMITH: Well, first, don't we have a person that's going to respond to these questions?

MS. WALLERSTEIN: Yeah.

MR. O'BRIEN: I think we have a question on the table about where this thing goes. So, can you give us an answer about that?

MS. WALLERSTEIN: We are moving towards signing the ROD. It's -- it's in final review by NAVFAC headquarters, and we're looking at having the ROD signed here in the near term.

MR. O'BRIEN: Well, it sounds like, Laurent, you've -- you've got some major concerns here.

MR. MEILLIER: I don't know if I would -- you know, I mean, "major concerns" makes it a little bit more, you know, polemic and, therefore, I would not -- I would not use that word.

MR. O'BRIEN: Well, let me ask you this, are you all right with this being signed right now?

MR. MEILLIER: Once again, this is another very good question. And I've talked about this with my manager, and basically what -- what we are looking into is -- is the fact that we -- and it hasn't been yet decided, so, you know, this is just information -- for inform- -- for informational purposes only. It looks like we -- the Board -- Board staff will probably not

sign the document and that we would draft and create a letter that would agree to disagree on -- on two -- two areas for which we haven't seen any -- any progress or any -- where -- where the Navy hasn't agreed to comply to -- which the Navy hasn't agreed to comply.

Those two topics are -- the first one is the applicability of the San Francisco Bay Basin Plan as an ARAR, and then the second one is the fact that the concentration of the contaminants of concern in the leachate needs to meet federal and state criteria, and those haven't been defined, as I stated, before they leave the Site 1 footprint.

So, therefore, that letter would state that, and we would not sign the document, and it would basically, you know, legally protect the Regional Water Quality Board from the decision that the Navy has taken.

And we understand that the Navy, you know, is -- has also made some, you know, great progress with -- you know, to the fact that two -- two areas of concern to us have been agreed with with the Navy.

So my purpose is definitely not to stall the signature and not to prevent a remedy for which we agree. We agree on the remedy as a containment system, and we don't want to stall that, so, therefore, we will not impede the signature of that document, but we would

not sign it. So, that's basically the position, you know.

And we are -- we are -- right now I'm actually legally working on that, and I'm getting -- it looks like the Region 5, which is the Central Valley Regional Water Quality Control Board, has drafted such a letter for another Record of Decision, and I would use this letter as a template. And I would also actually ask the Navy to state in the ROD Site 1 cap that those two -- those two areas where we agree to disagree, and that in the table of ARARs, the ARAR of the San Francisco Basin Plan, and how the Board agreed to disagree with the Navy.

For us to be able to state that we agree to disagree we need to agree at least on the containment, and we do because otherwise we would not be able to do that. I would not be able to state this we-agree-to-disagree language.

Does that answer that question?

MR. O'BRIEN: Thank you.

MS. WALLERSTEIN: Okay. What I would like to do is move ahead with --

MR. O'BRIEN: Well, excuse me, Margaret. I would like to hear now what the outstanding concerns are from the EPA.

MS. WALLERSTEIN: Well, I think, you know, we -- we're moving into the discussion phase. What I would like to do is -- you know, we heard Igor express his concerns and the LRA consultant, and I would like to have Tetra Tech's consultant give a response, and we can continue the discussion.

MR. O'BRIEN: Igor was allowed to ask questions. Now a member of the audience is asking a question, but we don't want to give a full answer to him. Are we going to postpone that, then? When are we going to give Dean McLeod an answer?

MS. WALLERSTEIN: Well, I'd like to -- I'd like to have the final presentation and then we -- you know, we've had some discussion and some questions here. I would like to continue with the final presentation, and then we can continue the discussion.

MR. O'BRIEN: Well, I think you're being very selective about what we're going to entertain for discussion here.

MS. WILLIAMS: Dean, as a member of the public, will be given his time after the official people have had their say.

MR. O'BRIEN: Go ahead.

MS. WALLERSTEIN: Joanna, do you want to introduce Tamara?

MS. CANEPA: I sure will.

This is Tamara Zielinski. She does work for Tetra Tech. And she has about 20 years working on landfills and spent ten years with the Integrated Waste Management Board, which is a California state agency that permits landfills.

So she has helped prepare these responses that you guys all got a copy of and will hopefully address questions that were raised tonight. And we can continue the discussion and be open to other questions as necessary.

So with that, I'll hand it over to Tamara.

She's an engineer by trade.

MS. ZIELINSKI: What I'd like to do is present some of the main issues and hopefully answer some questions with regards to the response to comments for the landfill Site 1 ROD.

Several issues came up tonight, and we've been thinking about them and preparing a presentation that hopefully will give an answer to some of the issues.

First we started with the landfill investigation. We've looked at -- first what we did is we looked and -- did a landfill investigation and looked at areas of the landfill that may be an environmental concern.

We looked at the cover material and found that it needed additional cover, so we're going to take action there. We looked at the landfill gas. The landfill is generating some gas, so we'll be taking action there. We looked at drainage issues around the landfill. That needs action. We'll be taking action there. Erosion, same thing, needs action. Security, needs action there.

MR. BOYER: I'm sorry. When you say "action," you mean action in the design? These will be built into -- these actions will be built into the design to remediate these issues? Is that what you're saying?

MS. ZIELINSKI: Let me get into the next one, and that kind of addresses that issue there.

The key issue here is that there is still a question about groundwater and what type of action or if we should take action there. So, what we need to do, as EPA was saying, is do additional study on that to determine what action would be appropriate.

Right now we need to have additional information, such as ecological concerns, et cetera, so we can make a -- a good decision on what needs to be done with the groundwater. But we know right now there is certain actions we can take.

This -- I do appreciate this flow chart here.

That's what it does feel like sometimes. But what I tried to do here is outline the process and identify where things will be addressed. It's not that they're not being addressed, but they're being addressed under certain mechanisms.

Right now we're traveling along this process with a remedial investigation, feasibility study, the proposed plan, and now we're at the landfill ROD stage. But what we've seen is that items I mentioned before obviously need action, and EPA's developed a presumptive remedy for landfill that identifies containment as that action.

EPA didn't make that decision lightly. They went through several RODs and evaluated them, and the alternative continually came up with containment or capping as the remedy. There were a few sites in the RODs that they evaluated that were -- where excavation and off-site disposal was identified, but that volume was minimal, under 3000 cubic yards.

So, there was -- there was a big difference. We're estimating somewhere around 130,000 cubic yards. So, there was a big difference in the size that's being excavated. It was only 3000 cubic yards versus somewhere around over a hundred thousand cubic yards.

MR. O'BRIEN: Can I ask why there is such a

discrepancy in the volume? It's over 400 percent.

MS. ZIELINSKI: You know, we've excavated over a million cubic yards, and what we can do is use our best technology to identify the area of the landfill and try and estimate the volume. And we use our best practices that we have now. But even then, after we excavated some of them we found that -- we estimated 200,000 cubic yards, and it's 250,000 cubic yards. We estimated 700,000 cubic yards, it's 950,000 cubic yards. So we're using the best technology right now.

But there is a lot of ways you can interpret that and identify discrepancies in it. But when we actually construct the landfill, we will be excavating back and identifying the edge of the landfill to ensure that we are containing the entire landfill.

MR. RAMSEY: I actually have a real simple answer for you to the question, Mr. O'Brien. The waste estimate that was presented before, the 30,000 cubic yards or tons, that's actually an estimate of the mass of what they think over the decades was operating. The Navy came up with a volume estimate. They think so many tons of garbage and waste went into the landfill. That's where we get the original 30,000. It came from a 1983 initial assessment report on the first, kind of, preliminary assessment for the facilities.

So, what's happened, of course, is that 30,000 was done like a truckload at a time with all these other refuge and -- and debris, things like that, so you end up with 30,000 cubic yards or 30,000 tons mixed in a 13-acre site. The Navy can't magically come in and pull out that 30,000 tons or cubic yards because there is a slight difference in the conversion of those numbers. But it's all mixed up in there. And that's the trouble is you have to start making swiss cheese of that to try to figure out what's where exactly.

MS. ZIELINSKI: We were talking about addressing issues in the remedial design. What we know as far as the presumptive remedy for containment will be -- and landfill cover will be addressed in the remedial design, but there is still a big question with regards to what's required for groundwater.

So instead of just continuing on into the remedial design with that question, we're going to be going back and doing a remedial investigation, feasibility study, proposed plan, and ROD for the groundwater investigation to determine what would be necessary for groundwater. It's not something we're just pushing aside, but there's a whole process that we're going to go through to come up with the information that's necessary to make the right decision

on what's needed for groundwater.
ATTENDEE: What's the time frame for that course of action?
MS. CANEPA: The draft groundwater study is planned for this spring -- the draft work plan for it. So first you develop a work plan and that gets reviewed by the agencies and the public. So getting into the field would probably be, you know, late fall or winter.
MR. O'BRIEN: But you're still going to sign the landfill ROD before you do the groundwater investigation?
MS. ZIELINSKI: There is some groundwater investigation that has been done. We're going to continue with that, but the things we know we have to do are install the cap on there. It's a general requirement for landfill closures.
I think the question that was raised is will it be consistent with the final remedy. Are we doing something that, you know, wouldn't be consistent with containment or that would cost -- you know, if we excavated it, off-site disposed of it, would it cost less if there was a groundwater problem?
Well, if there was a groundwater problem and we excavated out the waste, we would still have to put a cap on it. According to the regulations you would have

to achieve clean closure to be able not to do anything. And clean closure is defined as removal of the waste and waste residuals. So if you still have some residuals in groundwater, then you would have to close the site as a landfill still.
So you could excavate all of that out, have a water quality issue, and then have to put a cap on top of it anyway and that's -- you know, without doing that you could see that that would be a more expensive alternative because you would have to cap it anyway.
Okay. This is a flow chart that I just provided. There is a couple of them. One's big and one small. You can see the bigger one. It just illustrates that there is two mechanisms, one for human health for closure of landfill and one for water quality. There is two considerations there. And the human health ones are normally dealt with with the California Integrated Waste Management Board, and water quality is dealt with with the Regional Water Quality Control Board.
There is several items, as we discussed earlier. If you have exposed waste, you have final cover. If you have a drainage issue, you have requirements for drainage. If you have erosion control, you have requirements for erosion. Slope stability requirements also. If you have leachate seeps, you need

to make sure you don't have contact with leachate. If you have landfill gas, you have to have landfill gas monitoring. You need to restrict access. There is site security requirements. And if there is new development -- development on the landfill, then there needs to be a new post-closure plan for that landfill. Right now we're looking at open space.
I think there was a comment earlier about buildup of water on the liner. And you can't have a foot of water on top of your liner. That requirement -- we dealt with that at -- at Mather Air Force Base.
And what we're meaning by leachate seeps and contact is on the surface of the site. If there is water underneath, it doesn't mean that we have to go in and install a system to deal with that. That is not being done in the regulations. And they documented that and made the ROD. So these are all items that are considered just from exposure to human health.
Then there is water quality items that you address for threat to water quality. So right here we can see we need to take some action. However, as you go through the water quality part of it, you get detections. If there's a threat to water quality, you do protection monitoring to detect if anything is leaving the landfill site. If you have a significant

release, then you go on to evaluation monitoring to see how extensive it is and do a feasibility and corrective action plan.
And what you'd end up doing is taking a source control measure. Capping is considered a source control measure. And you'd also look -- do we need to do any additional measures for the landfill for water quality. So, that's that second process line that I showed you before right down here (indicating). So, that all will be evaluated, and this part will be evaluated.
From evaluating this part we see that we need to take action. We need to cover the waste. The cap that will be built on there is going to be built to the State prescriptive standards. So, it will have a barrier layer in there for protection of water quality to limit infiltration. So even if you did have a groundwater problem that required source control, it's the same cap that goes on there. So they're not -- there wouldn't have to be additional action of putting on a cap that would protect water quality also.
The issue that was brought up about lateral migration, which I'll get to a little bit later, which was a concern there.
I think these are some of the issues. What I tried to look at is -- I know there is a lot of talk

about why excavate, why not, and I think I touched on some of these issues already with the EPA presumptive remedy. They evaluated several -- you know, over 50 landfills and looked at what the regular remedy was. So they went through the RI, the FS, the proposed plan, and ROD and kept coming up with the same conclusion for the landfills.

One item, too, is that the waste board put out -- California Integrated Waste Management Board put out some guidance for landfill such as these, and it talks about excavation. And their recommended level for excavation is under 10,000 cubic yards. So, once again, it's like an order of magnitude over.

I think we talked earlier -- they mentioned physical hazards, possible transport through the community. I think we talked about how capping is still required if we have a groundwater problem, and, obviously, there is the cost issue.

Why containment? Like I was saying, once again, that it was EPA's presumptive remedy. It was selected over and over again as an approved remedy for landfills. The size of the landfill, like I was saying, is over 10,000 cubic yards. There is the cost. Land use, it's going to be open-space area. And there is -- this meets the California state standards for landfills.

Generally those landfills are closed off and capped.

Okay. Right here, this is similar, but it's not as animated, to Igor's (indicating).

MR. SKAREDOFF: I didn't put music in.

MS. ZIELINSKI: I'll have to remember that.

What we have right now is there is existing waste material on the surface and underneath the level of the Bay mud. So you have Bay mud across here, and then you have existing waste through here, and then you have waste that's under the level of the existing ground (indicating). That's the situation we have now.

With the cap that we have on there, here's what we're looking at doing. We'll be excavating that waste back, pulling it back 50 feet, and then putting the cover, and extending the landfill cap 50 feet beyond the edge of the waste material and tying it into the Bay mud. So we'll have that tie that you were talking about earlier covering it completely and then tying into the Bay mud.

This is a little different. Usually there is a tie-in that stops right there, but there is being an extra measure taken to extend the landfill out 50 feet. That's to deal with and to help with the issue of lateral migration.

So the cap will help stop the vertical

infiltration, which would drive lateral migration. But also, with this extended area out here, it would have to travel a lot further to get out. So, that's an extra measure that we're taking to help with the lateral migration issue.

But that's not the end of the road there. With the water quality investigation that we'll be doing, we'll also be making sure -- monitoring to make sure nothing's leaving there. So we'll have monitoring systems there to see if we detect anything. Like I was talking about, detection monitoring and making sure that nothing's come out of the landfill and that it's contained in there. If something is, then it will be addressed as part of that groundwater Record of Decision.

There was a --

MR. SKAREDOFF: Before you leave that, could I ask you a question?

MS. ZIELINSKI: Sure.

MR. SKAREDOFF: When you do the monitoring, what will you actually be looking for? We're not sure what's in there, so how do we know what to look for?

MS. ZIELINSKI: Yeah. There is -- like Laurent was discussing, there is COCs that you determine first. So, what you would be doing is -- looking for are COCs.

MR. SKAREDOFF: Chemicals of concern?

MS. ZIELINSKI: Sorry. Stop me if I do that.

What we're looking for is chemicals of concern. And that would be based on what we possibly think that might have been disposed of in the landfill. So any possibility we'd look and add that to the COC list, and then for the COCs we'd evaluate and look for in the protection monitor.

MR. SKAREDOFF: Is this expected to be --

Is there expected to be surface water present after you've done this?

MS. ZIELINSKI: Yes. Yes.

MR. SKAREDOFF: What's to keep the surface water from eroding this away?

MS. ZIELINSKI: That's what we'll be doing is during the design we'll be developing a system that meets the standard for erosion control. And there is measures such as vegetation, et cetera, that can help with the erosion and -- to stop that erosion. And this site, once it's capped off, will be maintained to ensure that there is no erosion.

MR. SKAREDOFF: Okay.

MR. GRIFFITH: The additional extension, is that a standard thing to do, or is that a response to additional concern?

MS. ZIELINSKI: It's a response to additional concern of lateral migration.
MR. GERSMAN: Bruce Gersman, Concord Transcript.
Which comes first, the capping or the testing of groundwater, just in terms of --
MS. ZIELINSKI: We're already testing groundwater, but we need additional study on the groundwater. And it takes -- you know, we do monitoring periodically. That takes quite awhile. So we're doing it right now. And we're going to cap those.
MR. GERSMAN: Okay. So the --
So once all the groundwater testing is done, then a cap goes on or --
MS. ZIELINSKI: It's not just a single test. It's monitoring to determine if, you know, you have increasing or decreasing levels and to get a good characterization. You take that information and -- in here to determine if have you a significant release.
You need to do a statistical analysis. So you have to have enough data to be able to do that. And then also, like EPA was saying, you have to be able to do the ecological evaluation and determine, you know, what's out there that we need to protect.
MS. CANEPA: I guess I wanted to add a point,

that once you place the cap it doesn't prevent you from taking a future action to remedy anything that you might see of concern in groundwater. If this monitoring is ongoing and it turns out that, well, there is a groundwater problem, the cap itself wouldn't prevent any action from happening.
MS. IVERS: I know that adjacent to the Martinez Bridge here they're doing some work. They're putting in a new span there right at the former Rhone Poulenc, Stauffer Chemical, near Rhodia. There was a slag heap there that is sinking into this Bay mud. It's the same Bay mud that extends up the river here. And it was of great concern when they were beginning to build a bridge because they didn't want to get down in there and expose all this stuff all over again. And there was some remedy to that.
My question is about this dump area that's on this. It's going to continue to sink into the mud.
MS. ZIELINSKI: I don't believe we're seeing a lot of that. You have a slag heap. You have something that -- you know, the density of that slag metal material is much heavier than the wood and paper and plastic that you'd see in the waste.
MS. IVERS: But I thought we didn't know totally what was in there.

MS. ZIELINSKI: We don't. And there may be some concrete, but we're not seeing a lot of sinking going on right now.
The Redwood City landfill, they do have a problem with that because it's so huge and there is so much waste there. So, once again, you have a lot more waste than we have here.
MS. IVERS: We're already dealing with a Bay that has -- you know, can't eat the fish out of it and, you know, selenium levels are high, dioxin levels are high. There is that scrubbing action of the water. So already we're dealing with a Bay that's -- that we can't use.
So my question is, if there is even a concern that there might be additional stuff going in, how are we going to prevent that from happening?
MS. ZIELINSKI: It will be monitored to make sure that's not happening. There is -- like I was saying, there is a detection monitor to detect if anything is leaving the landfill.
MS. IVERS: How quickly can we respond to that if we find out there is something in the water?
MS. ZIELINSKI: There is -- under the CERCLA process there is Time Critical Removal Actions for within six months. So, there can be a quick response,

if necessary. But this landfill's been here for quite a while, so we're not seeing anything that's of the nature that would require a quick response. So we are taking -- you know, we're making sure that nothing's leaving the site right now.
Does that answer your question?
MS. IVERS: It's an answer.
MS. ZIELINSKI: I mean, what we're going to be doing is watching to make sure it's not, you know, going down and driving contaminants out.
So, there'll be cap systems in there in place, and there is -- there is a whole process, evaluation, monitoring, and feasibility study for that. If you need a quick-response action, that can be taken, but we're not really seeing a quick-response action to be necessary at this point.
MS. WILLIAMS: We need to take a break for a few minutes for the court reporter. She'll tell us how much time she needs.
THE REPORTER: Five minutes is fine.
MS. WILLIAMS: Are you sure five?
THE REPORTER: Yes.
MS. WILLIAMS: Okay. Five minutes. So, that will be at 8:48 p.m.
(Recess from 8:42 p.m. to 8:52 p.m.)

MS. WILLIAMS: Okay. We're back in session.
MS. ZIELINSKI: Were there any more comments?
MS. IVERS: Let me ask another question. It's like opening a floodgate.
My question was about earthquakes and liquefaction through the soil. What if the big one comes, what -- what can you tell us about that?
MS. ZIELINSKI: There is --
Like I was saying before, there is issues about slope stability. We'll be looking at the landfill and making sure that it's stable. There is either maximum credible or maximum probable earthquake. For class II it's maximum credible, and for class III it's maximum probable earthquake. And maximum credible is the big one, and the maximum probable is the one that's probably going to happen.
So, there is a whole section in the regulations that deals with slope stability to make sure that, you know, we don't have a liquefaction problem that's going to be a problem in the future. So, that's all evaluated as part of the design to make sure that we have a stable slope.
MR. COOPER: There actually was another question over here before the break.
ATTENDEE: Yeah. My question was if --

It appears that you're going to do the -- you'd like to do the cap first, study the groundwater, and then remediate any issues that you found with groundwater. If that's the case, and the cap's been placed on top of the site, does that essentially rule out any excavation in the future just due to costs because you've got to excavate and then potentially recap all over again?
MS. ZIELINSKI: I wouldn't say it would rule out something in the future. We've capped it off, we've contained it, and it's appropriately dealt with. Sometime in the future -- if, I mean, this place is always considered as a military base, can't really see that happening. There has been areas -- let's see.
Down in San Diego they did transfer the base, and the Port worked with the Navy to be able to do an excavation of material down there. But here it's a Navy facility. It's continuing and planned to be a Navy facility. And what we're doing is just making sure that that contamination won't migrate anywhere.
MR. MEILLIER: Okay. One essential piece of information that hasn't yet really been brought up is the fact that we only have an approximate of what the water quality is in groundwater at this site because of the location of those monitoring pumps. Those

monitoring pumps are found in the perimeter of the landfill. None of the monitoring pumps are found within waste mass.
So I just want to make sure that the public understands that piece of information. It's essential to our understanding of water quality and the characterization thereof.
MR. SKAREDOFF: Is that going to change with the proposed monitoring?
MS. CANEPA: The plan hasn't been developed for the -- for the monitoring that is going to happen.
MR. SKAREDOFF: So conceptually are we just going to stay around the edges, or are you going to try to sample inside?
MS. CANEPA: Well, one of the main concerns and one of the major comments from the agencies have been that the wells that are there are offset about 50 feet from the toe of the landfill. So the Navy's agreed to put wells in at the very toe. But, again, the plan hasn't been written or developed yet.
MR. SKAREDOFF: The toe would be where on this diagram here?
MR. RAMSEY: Somewhere within that 50-foot cap. Somewhere within.
MS. CANEPA: (Indicating.)

MR. SKAREDOFF: Not there. Well, I'm hearing several different things.
MS. CANEPA: Again, the plan hasn't been developed.
MR. SKAREDOFF: At the edge of the --
MS. ZIELINSKI: Yeah, what you have there is that's where the waste was. And what the regulations require is that you put it at the end of the unit. And so we would be required to have vertical control right there at the edge of the unit.
MR. SKAREDOFF: Well, in reading over these discussions leading up to the ROD, I think it was -- one of the main points that's made in there was that the bottom of this landfill is considered to be permanently inundated. I think that was a statement that was argued over, and finally it was said, yeah, it's permanently inundated. So, there is a bunch of water sitting underneath this thing out there. I guess presumably it's on top of the Bay mud and below the bulk of the landfill.
Is there any -- going to be any attempt to identify what's in that water?
MS. ZIELINSKI: What they'll do is --
Okay. Now I forgot the question. Do you mind repeating?

MR. SKAREDOFF: Yeah. Is there going to --
Are there any plans to identify or characterize the water that's in the bottom of the landfill now?
MS. ZIELINSKI: It's not a requirement. What you'll be looking for is any possible contaminants of concern exiting out the landfill. So, what you want to do is make sure there is nothing bad coming out of the landfill. It's not a requirement to go in and -- and drill through a landfill and take groundwater samples out of there. You have problems associated with that. You might be creating a conduit that could be a problem in the future.
MR. SKAREDOFF: Are we assuming that it's not going to penetrate on down into the native groundwater, then?
MR. RAMSEY: Groundwater is groundwater.
MS. ZIELINSKI: We'll be monitoring for that.
MR. SKAREDOFF: Well, I mean, you got this thing, you got the mud it's sitting on. Somewhere underneath that there's some other groundwater.
MS. ZIELINSKI: Yeah, you have the -- the schematic which you had up. There you had that groundwater. That's what will be monitored to make sure nothing's coming out of there.
MR. SKAREDOFF: Well, you're going to be

monitoring off to the side. How do you know it's not coming down here?
MS. ZIELINSKI: It will be monitored --
If there is anything migrating away from the site, once again, the concept is to contain in that area.
MR. SKAREDOFF: Okay. So the idea is to keep it in the footprint. If the footprint goes to the center of the earth, it's okay just as long as it stays in there; right?
MS. ZIELINSKI: Yeah.
MR. MEILLIER: Igor, was that kind of asking -- I mean, there is potentially another aquifer, a sandy aquifer found below the Bay muds there. And there hasn't been any wells drilled to that depth and, therefore, characterized the quality of that water, and that potentially -- potentially sand lenses that might connect, you know, the -- the leachate that is produced to this sandy aquifer found below it.
MS. ZIELINSKI: Yeah, there is a lot of issues still associated with the groundwater. We'll be going through the whole process and getting back to address those.
MR. BOYER: There's Dean, then I've got a couple questions.

MS. ZIELINSKI: Sure.
MR. McLEOD: The elephant that's in the room that everyone doesn't want to talk about is what's in the landfill. And until July 17th, 1944 it was -- the largest home-front disaster of the war occurred a couple of hundred yards from here, and three ammunition ships exploded and the debris went for many miles. And the Navy made an extensive inventory of every piece of that debris.
Did they put that in the landfill?
MS. ZIELINSKI: I really couldn't tell you what the Navy did with that.
MR. RAMSEY: I would say no.
MR. McLEOD: Do we know that?
MR. RAMSEY: One example, give you an idea, one thing we've been -- some light reading for the history of the Weapons Station, two full boxcars during the '44 collision were knocked in the Bay. Those two full boxcars were taken out, they believe, to one of the offshore islands. I believe it's --
MR. BOYER: Yeah, and buried.
MR. RAMSEY: -- Ryer.
And the Navy did a fairly in-depth geophysical looking -- using magnetometry, I think, in the air, and did an extensive survey to try to identify where those

two boxcars had been buried. And this all happened right after this collision.
MR. McLEOD: Well, they also did an extensive inventory of every piece they found. And I've got a copy of it. And there were pages and pages and pages of every piece of metal.
Now, the question is, did they dump it in the dump which was a couple of hundred yards from where the explosion occurred?
MS. ZIELINSKI: I couldn't --
MR. BOYER: I guess you have to ask yourself --
Well, Dean, I'd ask myself, if it's pages and pages and pages, how big would that dump really be if they'd put all that stuff in there would be my next question. That dump's probably not big enough to really contain all that.
MR. McLEOD: Well, it's 11 acres. Most of it was disintegrated. The only big pieces were metal. So, you know, if you talk about having trash in the dump, I don't think that we're concerned about that.
MR. BOYER: Do we care if pieces of iron plate are degrading in there? If they were lead plate --
MR. McLEOD: It sounds like a very simple thing to determine. It would answer all kinds of questions about all of these remedies that we're talking about if

we could investigate what's in there.
MR. RAMSEY: EPA's -- we've had this uncertainty about what goes on. For the Navy's benefit, I mean, just to repeat the things I've heard, one thing came up with this Tritonal, which is a TNT/aluminum mixture. That's the only reference to any explosives being put into Site 1 is 700 pounds -- or 500 pounds of Tritonal filler, and so we figure out Tritonal is TNT. The Navy has indicated to the agencies that that is generally not their -- that's not their procedures for disposing of munitions.
MR. McLEOD: In 1944?
MR. RAMSEY: Well, I mean, they had a burn area. So we know some of this powder is from Site 13 burn-off there. They had the open burn in the detonation areas. So we do know about -- those certain areas of those kind of demolition activities occurred. And the Navy had indicated that Site 1 they do not believe that's the case.
The agencies have uncertainty about these things. We've expressed a lot of interest, and there is a willingness to be out there. We want to see when this pullback occurs and the cap is being constructed -- that's going to be the best opportunity to actually see things as they're excavating.

Now, myself and an Integrated Waste Board staff member, who now has been replaced by a new staff member because the State has some, obviously, budget problems, but I went out last year with Christopher Fong, I believe is his name. We walked a fair amount of the toe of the landfill, and there was nothing I saw with wings or fins on it.
MR. McLEOD: Then it would be on the bottom. Since the dump's been being built since 1944, they wouldn't be on top.
MR. RAMSEY: But the idea that actually waste -- and that's when you have to understand, from the EPA's standpoint and from at least from -- establish -- my suggestion was let's carve out -- this is something we can salvage in the decision. Let's carve out the containment cap. That can be salvageable. We can deal with that. We're going to have to look at the groundwater a lot more carefully.
We didn't see any screaming indications of any big groundwater plumes. We don't necessarily have a human health aspect associated with the groundwater. It's an ecological what happens as the surface -- from the surface water and, therefore, impacting on the Sacramento/San Joaquin Delta, you know.
MR. McLEOD: As long as you leave it as a dead

zone.
MR. RAMSEY: Well, this is an operating base. That's the other thing, it's an operating base.
MS. ZIELINSKI: I mean, there is all these standards for human health protection. All of these. So they're doing a lot to protect human health. It's just going to be open space because it is a military facility. So they're doing a lot to contain the waste and protect human health.
MR. BOYER: So I've got a question.
Patrick, in the totality of the circumstances that you see here, if we put a cap on this tomorrow, is it going to make it worse?
MR. LYNCH: No. I mean, the only thing the cap will do is make the cost of groundwater remediation higher.
MR. BOYER: Okay. And EPA and the Board agree with that, you aren't going to make it worse tomorrow by putting a cap on it?
MR. RAMSEY: Well, that's why, again, it was EPA -- it was my suggestion, Mr. Boyer, you know, a year and a half ago that this is what I had seen as the workable component of that Record of Decision.
In the original ROD what the Navy was proposing was just to monitor the groundwater. And we said we

don't want to accept a monitoring remedy at this point. We need to look at it carefully.
There was questions about the adequacy of the monitoring well network. And that really does get into well design and locations. But we did have -- there is an existing data set. There was a team --
I think I mentioned this before. There was a team of agency representatives. There was -- Water Board had representatives, EPA had representatives, and the group of people went through and agreed to it, and I generally believe the records describe that. So, there was some attempt to -- you know, from the agency standpoint to accept what would be generated.
Of course, as time changes we have a new group of people. We're looking at things slightly different. We said we weren't completely prepared.
Laurent and I came to the site about the same time, Regional Water Board, myself, and we just felt that that was one area we weren't as comfortable proceeding, but I felt that it was workable to salvage the containment cap since, again, that is a -- generally what happens with these kind of landfills when you get to this kind of size.
I did want to emphasize, too, we've heard a lot tonight where the EPA presumptive remedy is mentioned.

What I think people may not understand sometimes is it's a guidance, and no one has ever added the word "guidance" onto the end of this. Presumptive remedy guidance.

And a guidance does contain -- you know, it has a lower legal threshold. We can look at these things, but it's not the law one must follow. And those presumptive remedy guidances were being developed about the same time that this landfill has been going through the RI/FS and Record of Decision process.

MR. BOYER: So -- and this is an open question to any expert out there. If we pull all of the stuff out and we know that the bottom couple feet or bottom foot is inundated totally, and we pull all of that out and we throw in new, fresh landfill, considering Area I is totally within the R Area in Area 2, what's to prevent it from being recontaminated by that groundwater later on from Area 2, which has not been dealt with?

MS. ZIELINSKI: You're saying --

Are you saying cap, we're capping it off?

MR. BOYER: I'm saying instead of capping, you say let's dig this thing out and remove -- and removal is the answer, and you do remove down below the groundwater, you place in new fill, and yet the groundwater is still there that is still part of Area 2.

And --

And from what I'm hearing Patrick say is that -- that he doesn't believe necessarily that the -- that the characterization of the water flow is correct there, that you think it's still down flowing through the Bay mud in that area, which to me would mean that it's going to bring that groundwater from Area 2 back into Area 1 and still drop in that area.

Yes, no, sort of?

MR. LYNCH: Yeah, that's not --

When I'm speaking about vertical flow, I don't see, you know, that having groundwater from the R Area going into -- that is really a lateral flow.

And let me point out that I took a look at the measurements that they have for gradients and the soil conductivity. And if you -- if you take those measurements from the site and you realized the age of the landfill, leachate could have traveled to a depth of between 20 feet and 450 feet depending upon the different gradients that were measured.

So, again, from what I understand, the usable aquifer is about 50 feet deep in this area. So, there certainly is potential already that some leachate has traveled through 50 feet of Bay mud and impacted.

MR. SMITH: Would you expect to see much

horizontal movement if there was that much vertical movement?

MR. BOYER: That would be my question, if you see that much vertical, I'd expect that much horizontal.

MR. LYNCH: You're basically --

You have surface water, you have the fill, and the fill is essentially -- when it's raining is -- is -- the water level in the fill is increasing. And that will both increase the amount of that shallow groundwater that moves laterally into the artery wetlands, or the most recent measurement actually showed groundwater flowing inland, the recent sampling they did in the fall.

But, you know, that -- that gradient would also increase the -- the vertical travel. So, I mean, both -- both should be happening. Probably the lateral one is more dominant simply because the soil --

MR. RAMSEY: That's the way they're laid down, Patrick. I mean, that's the thing. I mean, that's right. That's the way the soils are laid down. So you basically always have that porosity higher in the lateral direction than you do vertically.

MR. BOYER: Well, for me --

MR. RAMSEY: This is a very complicated, you know, very detailed discussion of the groundwater and

maybe that just -- maybe it's --

MR. BOYER: For me this comes down to a monitoring issue later on, the groundwater study monitoring. The cap can go on. As long as we're not going to make the problem worse, you might as well cap it now. All you're doing is spending a little bit of my taxpayer dollars if you're wrong because it comes down to monitoring the groundwater survey later. And there's nothing to say that if we're wrong they won't go back and dig it out later and say we screwed up, sorry.

But I don't see anything here that says -- that lends me to believe that a cap is not the right answer at this point. The groundwater answer is going to be separate, I think.

MS. ZIELINSKI: Any more questions?

MR. MENESINI: Well, I would tend to agree with that.

Go ahead, Igor.

MR. SKAREDOFF: Go ahead, Mario. That's all right.

MR. MENESINI: I would tend to agree with your statement because, you know, landfills have been capped ad infinitum. And I don't know when the last excavation was done to remove billions of tons of cubic feet of tons of --

But, anyway, we've got good experience in capping. I agree that monitoring and knowing what's there -- I don't know how much we know about what's there, and -- and I haven't really seen any good data on that. But as far as I'm concerned, I don't see any other remediation at this time that would be safe and realistic in terms of economic practical value. That's my perception at the moment.

MR. SKAREDOFF: Just to kind of cross-check my own sort of understanding of what I've been hearing, there's sort of -- sort of broad themes here, I think.

One idea is that we've had this thing here for all these years, and it's not good. So let's kind of quit messing around and do something that we think is going to be helpful. So, what should that be? Should that be trying to keep it in place or whether that should be to remove it. One thing I've heard is if we remove it, chances are we'll still have to put a cap on it. Is that --

I just wanted to cross-check that with Patrick. Does that sound like --

MR. LYNCH: You know, again, not only do I think it would be highly impractical to do that in the wetland, that is the way the laws are written, but you -- you would only be required to do that if there is

groundwater contamination. And then you ask yourself, well, maybe the groundwater isn't contaminated right now, but what if it becomes contaminated in another ten years.

MR. SKAREDOFF: Okay. So the choice would be to remove it, haul it off somewhere, or to encapsulate it, basically. And then when you talk about encapsulating it, I guess the whole groundwater issue got so complex, I'm inferring that the decision was made, let's go ahead and cap it and solve the groundwater problem down the road just so we know -- so we do what we know we can do and not delay applying some kind of a remedy any longer.

Is that kind of the rationale behind this splitting the processes out?

MR. RAMSEY: Well, except --

Generally, Igor, correct, but I would add that, again, when we looked at the -- now we have this 1997 groundwater technical memo, and that has -- has just now recently been supplemented with this little report. So we have a draft report, I believe the RAB members got also, on this little snapshot of groundwater sampling. So prior to this result, this report we just received this last week, all we were utilizing was the 1997, '98 technical memo, and that had a series of several years

of groundwater sampling. So, that was the groundwater RI, again.

And assuming that the acceptability of it -- I'm answering your question, Igor -- is the idea there was -- we had that data for those wells that had a group of people that said this is where we want these wells and we're going to sample --

MR. SKAREDOFF: Okay. I'm not -- I'm not disputing that. I'm just trying to understand sort of in a broad sense the reason we took this split, this fork in the road here, is because we felt we -- you know, the feeling was that putting on a cap was going to be something that would be good to do and that it would not necessarily keep us from doing something later if we decided something more had to be done.

MS. ZIELINSKI: Right.

MR. SKAREDOFF: We put on the cap, it keeps the water from infiltrating down. If we do this thing this way, it reduces the lateral movement, maybe even prevents it, and in the meantime, then, we're going to go ahead and study the groundwater and figure out what to do next if something -- or maybe if something needs to be done next.

Is that kind of in a broad sense where we are?

MR. RAMSEY: We have a lot more. Again, what

the original ROD was proposing wasn't a no action, but it was monitoring, which is like saying we're not going to do anything --

MR. SKAREDOFF: Okay. I'm not trying to re- --

I'm trying to go forward from where we are here.

MR. RAMSEY: Well, I'm trying to go back to where this thing split at because I think everyone keeps wanting to know where did this thing split. And I'm the person who made the suggestion, and I'm here to answer the question.

MR. SKAREDOFF: I've heard your answer. Okay. Thank you. So, that's where we are now; right? Is that -- is that sort of the sense of -- of where we're -- where we are at this point?

MS. WALLERSTEIN: Yes. And we're proceeding with the groundwater work that needs to be done.

MR. SKAREDOFF: Right. We're -- we're doing this because it's sort of a do-no-harm kind of thing and it could possibly do some good. And in the meantime we're going to go look at -- see if there is -- anything more needs to be done in connection with the groundwater. And the reason we're doing this intermediate thing now is because we don't want to wait until the groundwater stuff is done and have more

infiltration take place in the meantime.
Is that kind of the sense of where we are?
MR. RAMSEY: That and these Records of Decision we have -- in addition to a community that's saying when are you going to do these actions? The Navy and U.S. EPA is responsible to our agency, we're responsible to congress, we're responsible to taxpayers of this country also, and because of that we're trying to proceed on this.
MR. BOYER: Okay. At this point, you know, the only thing that would tell me we have to dig this out is if somebody says, hey, in this well we're finding this chemical and it's at this point and we need to deal with this, and the only way to deal with it is to pump this crap out and dig it out.
We're not seeing that, are we, anywhere yet?
MR. RAMSEY: Yeah, there was no --
In the groundwater we didn't believe we had these kind of screaming results that said there is some imminent groundwater action that has to be done or we're going to be wasting the salmon or something like that.
MR. BOYER: You've got salinity problems, you may have some Otto fuel, biodegradation products, but until the groundwater study itself goes forward in a more detailed way, you aren't going to know for real

what's there yet.
MR. RAMSEY: And we also go back and look real carefully about, you know, where else could this -- kind of looking at the data, it's like how acceptable were those monitoring wells -- the network.
MR. BOYER: I say slap a cap and give me a monitoring system.
MR. RAMSEY: There are actually a lot more wells out there than have been presented that have been sampled in this last snapshot. And so we will, when the Navy finally gets the funding to start the work plan, to do the groundwater study, submit a work plan, but they will sit down with us and talk to us about the existing data, then we can start looking real closely at the well logs, you know, what's been done, where the wells are, which we've actually been doing because, actually, that exercise has already actually occurred when we looked at the Tidal Area Sites 2, 9, 11 RI data last six months ago.
MR. SKAREDOFF: One more question. When Patrick was making his presentation, he was sort of working out the scenario where if we do the cap and we do the monitoring and we end up having to do some disposal of things or water -- pumping out of water, whatever, that can likely end up costing as much as

digging the thing up in the first place.
I guess I would like to hear the Navy's response to that.
MS. ZIELINSKI: He's saying that it would cost as much --
Oh, I think I know what you're talking about.
MR. SKAREDOFF: If we put in the barrier and we pumped out the water that's leaching out of there and treated it and disposed of it, as that would be going on the dollars would be chinking away in the meantime, and doing that would cost in the same ballpark as it would to dig it up and remove it in the first place. So cost is really not the driving force here.
MS. ZIELINSKI: Yeah, the EPA criteria, as you know, has a lot of variability in the cost estimate. So, what they're looking at -- what they're looking at is seeing, you know, with that variability they could be relatively equal, so that takes cost pretty much out of the decision.
There is nine evaluation criteria, and cost is a balancing criteria, but compliance with ARARs and -- etcetera are the threshold criteria. So that what that does is it just says, okay, that's in the ballpark, same area. So, it takes cost out of consideration for balancing.

MS. ZIELINSKI: Any more?
Okay. Thank you very much.
MS. WALLERSTEIN: Thank you very much, Tamara.
MR. BOYER: Patrick, thank you as well.
MR. MENESINI: I think that's Engineering 1-A, 1-B.
MR. SKAREDOFF: Feel like you've just been to the groundwater gym?
MR. MENESINI: Good job.
MS. ZIELINSKI: Thanks.
MS. WALLERSTEIN: Okay. Well, that concludes our last agenda item. And I would like to thank all of our speakers, Igor, and Patrick, and Tamara, and I'd like to thank everybody who contributed in the conversation.
And do we have a motion to adjourn?
MR. MENESINI: I'll move it.
MR. BOYER: I'll second.
MS. WALLERSTEIN: Next month we're tentatively slated for the Willow Pass Community Center. And I need to talk to Chris Boyer about that afterwards. But for right now we're at the Willow Pass Community Center. But we'll get that nailed down within the next week, and it will be mailed out with the agendas.
So we had a motion to adjourn and a second.

All those in favor, Aye.
THE BOARD: Aye.
MS. WALLERSTEIN: Adjourned.
(Off record at 9:07 p.m., 2/2/04.)

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 18th day of February, 2004.

Janine P. Gamble

JANINE P. GAMBLE, RPR, C.S.R. No. 10372