

COPY

MEETING OF THE
TREASURE ISLAND
RESTORATION ADVISORY BOARD

Tuesday, March 26, 1996
Admiral Nimitz Conference Center
Treasure Island
San Francisco, California

REPORTED BY: SANDY MOVAHED, CSR #5623

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ATTENDANCE

U. S. NAVY

ERNIE GALANG (RPM)

JAMES SULLIVAN (BEC and Navy Co-Chair)

PRC ENVIRONMENTAL MANAGEMENT, INC.

THORSTEN ANDERSON

REGULATORY AGENCIES

GINA KATHURIA (RWQCB)

RACHEL SIMONS (U.S. EPA)

MARTHA WALTERS (SFDPH)

CHEIN KAO (EPA)

COMMUNITY MEMBERS

JAMES ALDRICH

CHRIS SHIRLEY (ARC ECOLOGY)

RICHARD HANSEN

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FRED HAYDEN

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PAUL HEHN

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CHEIN KAO

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ALICE LA PIERRE

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CLINTON LOFTMAN

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DANIEL MCDONALD

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PATRICIA NELSON (Community co-chair)

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HENRY ONGERTH

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DALE SMITH

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LAURIE GLASS (TI Citizens Reuse Cte)

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USHA VEDAGIRI

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BRAD WONG

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GUESTS

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KEVIN GRAVES

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DR. SOPHIA M. SERDA

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(7:10 p.m)

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CO-CHAIR SULLIVAN: Welcome to our
March 1996 Restoration Advisory Board meeting.

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Happy everyone was available to negotiate the
detour around Yerba Buena Island. It's likely
that that detour is going to continue for about
the next three months or so.

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Everyone should have a copy of the
agenda. If you don't, we have some extra
copies.

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The first item will be the approval
of the agenda, and is there any comments
concerning tonight's agenda?

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CO-CHAIR NELSON: I have one, Jim,
and it's a clarification under organizational
business. The CRC liaison report to the RAB,
wanted to acknowledge Dan McDonald's appointment

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1 1 to the interim reuse committee as chair, and
2 that should be read maybe interim reuse
3 committee report.

4 CO-CHAIR SULLIVAN: Interim reuse
5 committee report to the RAB. Thank you. With
6 that, if there are no other comments, we'll
7 consider the agenda approved.

8 The next item is the approval
9 discussion, approval of the 27 February minutes.
10 There were extra copies of the February minutes
11 on the back table. Are there any comments or
12 proposed corrections to the February minutes?

13 Well, then, the February minutes are
14 approved, and we'll now move into our public
15 comment period, the time we set aside at the
16 beginning of each RAB meeting for members of the
17 general public who are guests to comment on
18 anything related to the environmental cleanup.
19 Are there any public comments tonight?

20 MR. HAYDEN: I don't know whether

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they'd be comments. Could I --

CO-CHAIR SULLIVAN: Sure.

MR. HAYDEN: I did xerox a copy of the ferry service that came into being following the catastrophe, the earthquake in October of '89. It's when the area had finally gotten organized to set up such a service, and I thought it would be a useful reminder of the importance of such an operation. I think it's going to be self-evident to San Franciscans in general that there should be some sort of operation that would include Treasure Island in the way of a public ferry service.

CO-CHAIR SULLIVAN: Maybe you can leave that sitting out on the back table. Thank you.

We'd also like to take this opportunity to formalize two changes in our organization, or our organizational membership. One is, of course, that Pat Nelson is now here

1 1 as the co-chair, and we would like to take this
2 opportunity to acknowledge the work of Brad over
3 the last year and a half and to thank him, and
4 we're glad that we haven't completely driven you
5 away and that you're staying a member.

6 And as a small token of our esteem,
7 we'd like to give you the first public edition
8 of our Naval's Treasure Island, Yerba Buena
9 Island History Report. We'll be making copies
10 available by the next meeting for other RAB
11 members.

12 MR. WONG: Thank you very much.

13 CO-CHAIR SULLIVAN: Actually,
14 seriously, there is a little blurb in there and
15 it says if you have any comments, corrections,
16 please submit them, because we'll probably come
17 out with a revised edition before we close, and
18 then secondly, we would like to mark the formal
19 transition of our Cal EPA DTSC representation
20 from Mary Rosa Cassa to Mr. Chein Kao, and Mary

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1 Rosa is ceremoniously turning the label, and
2 then Mary Rosa is consequently now the second
3 recipient of the Treasure Island History Report,
4 and I'll have this third copy out on the back
5 table for anyone to look at, and we'll have
6 additional copies over the course of the next
7 month.

8 CO-CHAIR NELSON: Why don't we give
9 them both a round of applause?

10 MR. KAO: Well, just by way of
11 introduction, I guess, I would give a brief
12 introduction for myself. It seems that -- My
13 name is Chein Kao and I have a master's degree
14 in environmental health engineering. And I have
15 been working for the department about eight
16 years now.

17 For the first six and a half years I
18 was managing the federal facility program in the
19 Bay Area, and a year and a half ago I decided to
20 get out of administrative duties to work on the

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technical issues, so for the last year and a half I've been doing different kind of special assignments. And somehow, I'm going to circle around and come back to this managing project again. I'm glad that I got this assignment and be looking forward to working with you.

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CO-CHAIR SULLIVAN: Thank you.

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We'll now move into our program update period.

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I'll just make -- Well, all of you should have

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received a copy of our BRAC cleanup team meeting

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minutes. We did have a meeting on March the

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6th. We discussed the final changes to the BRAC

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Cleanup Plan which as we speak is now in

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printing and should be receiving your updated

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pages in the next probably week or so.

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MS. SMITH: I have them, I already

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got them.

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CO-CHAIR SULLIVAN: I haven't gotten

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mine yet. Then we discussed preparations for

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the human health risk assessment workshop which

1 we'll have a preview of tonight, and then we had
2 a continuing discussion on the federal
3 facilities schedule and the issue of our
4 petroleum sites.

5 MS. SMITH: Jim, I had requested a
6 draft of FFSRA, we went through this about six,
7 eight months ago or a year ago, where I happen
8 to have a copy of the current FFSRA. I really
9 wanted one and we had requested either a
10 draft -- actually, we did, we requested the
11 draft of the new FFSRA, we never got that.
12 Could we have at least the copy, because I read
13 in the BCT minutes that the BCT wanted that
14 before they made their final comments on the
15 BRAC Cleanup Plan. So could we at least have
16 it, the new FFSRA?

17 CO-CHAIR SULLIVAN: Well, let me
18 explain what it is and, Ernie, you will have to
19 correct me if I'm wrong, is that basically the
20 federal -- the FFSRA document is primarily a

2 1 contract document between the Navy and the state
2 of California. Now, included in that are
3 appendices, and one of the appendices is the
4 schedule, and the original schedule which was
5 signed with the FFSRA has been outdated. So we
6 had been working in the last BRAC cleanup team
7 meetings to revise that schedule and officially
8 make it a part of the FFSRA, but --

9 MS. SMITH: The FFSRA is not
10 changing, it's just the schedule?

11 CO-CHAIR SULLIVAN: Well, it's
12 changing in terms of the schedule, that's part
13 of it, but in terms of the rest of the bulk of
14 the document, there is no other changes.

15 MS. SMITH: Then I don't want
16 another copy.

17 MR. GALANG: Excuse me, Jim,
18 remember we are amending the FFSRA including
19 putting two sites.

20 CO-CHAIR SULLIVAN: I'm sorry, it

1 also includes the fact that when the FFSRA was
2 signed we only had -- we had 22 sites, and then
3 we've added three sites that we never officially
4 included in the FFSRA, that's the Clipper Coast
5 Skeet Range and then the areas under -- the two
6 areas under the bridge, on either side of the
7 bridge.

8 MS. SMITH: Would it be possible
9 just to have that amendment?

10 MR. GALANG: We will have that
11 available for you as soon as we have it approved
12 by the state. We are still working on the
13 draft.

14 CO-CHAIR SULLIVAN: So that would be
15 within the next month.

16 MS. SMITH: Many of us have the
17 original document. Some of us don't because
18 they're new to this RAB and we have to work that
19 part out. But I would only want the -- yeah,
20 because you're right, the bridge and the skeet

2 1 zones are the only ones that were not included
2 in the original FFSRA, and if they're only
3 changing the schedule overall, I don't need a
4 whole new copy.

5 MR. GALANG: Basically the BRAC
6 Cleanup Plan includes the other sites. The
7 amendment is just an official act so that we can
8 have it included in the FFSRA.

9 CO-CHAIR SULLIVAN: Once the state
10 has reviewed the changes, we'll provide the
11 changed parts to those who have the FFSRA.

12 CO-CHAIR NELSON: Can we make that
13 an action item?

14 CO-CHAIR SULLIVAN: An action item
15 to provide the portion of the FFSRA once it's
16 been approved by the state.

17 MS. SMITH: And for those new
18 members who did not get the original copy, my
19 Bogarted copy of the FFSRA, if they could have
20 also --

1 CO-CHAIR SULLIVAN: I have
2 additional printed copies of existing FFSRA that
3 we can amend with the corrected pages and
4 provide complete copies to those who don't have
5 them. Okay.

6 MR. KAO: For the record,
7 (inaudible) to give state approval.

8 MS. KATHURIA: We're waiting for an
9 updated letter from the navy.

10 CO-CHAIR SULLIVAN: We are on the
11 verge of sending it but it has not yet been
12 transmitted to the state, yes. Yes, Paul.

13 MR. HEHN: I got a couple of
14 questions about the minutes to the BRAC cleanup
15 team meeting on February the 7th. You want to
16 bring those up now or do you want to save those
17 for your organizational meeting portion?

18 CO-CHAIR SULLIVAN: Could we maybe
19 save that since we are -- I'd like to kind of
20 get into the educational topics if we could.

2 1 Great, thank you very much.

2 Next, Laurie, you want to say --
3 provide an update on the CRC?

4 MS. GLASS: Just a few things. Just
5 the last CRC meeting was our March 4 and minutes
6 were sent out. You probably all have gotten
7 them very recently.

8 Basically the three things that
9 occurred there were the report on negotiations
10 with Tie Dye which is the homeless services
11 consortium, are proceeding and they're making
12 some good progress. And there was an update on
13 the conceptual planning framework and is tending
14 to be called the preferred alternative. You
3 know, hopefully this current upcoming meeting
15 which will be held April 1st will be -- will
16 kind of address that statewide. And then there
17 is an interim reuse committee that originally
18 had only two members and quite a few more people
19 were added to it.
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Dan was named the chair of it, fairly recently, and Dan will give the report on letters, getting letters sent from public officials to the Navy regarding cleanup funds in a minute. And then also there was a -- you know, this is other planning site stuff, it wasn't strictly speaking a CRC meeting, on the 14th, and also there was a briefing on the planning commission, and on the 21st there was a workshop for the planning commission concerning the Treasure Island reuse plan.

So it was a whole bunch of new planning commissioners in San Francisco, so they have been brought up to speed, and a lot of questions indicated that they needed to be brought up to speed. Strike that.

They had some good questions indicating their interest in the subject.

CO-CHAIR SULLIVAN: We'd like to move now into the educational topics, and

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Rachel, you want to proceed?

MS. SIMONS: I'm Rachel Simons. I'd like to introduce Sophia Serda, and she's my technical support toxicologist, and she's also going to be doing the human health risk assessment workshop next month.

DR. SERDA: Good evening, everyone. I'm Dr. Sophia Serda, I'm with the Environmental Protection Agency. I provide technical support in toxicology and risk assessment to Rachel. And I'm here tonight to encourage and invite you all to attend the upcoming human health risk assessment workshop. I believe it's sometime, I believe it's April 9th.

Christina Goddard and I have been working on preparation for this workshop, and the goal of the workshop is to provide you with an understanding of risk assessment, to help you better review the risk assessment for Treasure Island that's coming out in August that's part

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1 of the remedial investigation feasibility study.
2 And that's very important.

3 I know many of you have a lot of
4 questions about risk assessment. To better
5 address these questions in our presentation,
6 there's some index cards around the tables. If
7 you have any questions in the risk assessment,
8 please feel free to write them down. If you
9 need a card, it's on the back. If you need some
10 cards to write your questions down, feel free to
11 do so.

12 And also, I just wanted to tell you
13 I'm looking forward to talking to you about risk
14 assessment. Actually, I've been doing it for
15 about 19 years now in academia, and in private
16 consulting in the last two years with the
17 agency, and it's my pleasure, I really delight
18 in having the opportunity to work with
19 communities and help educate those in the
20 process of risk assessment.

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1 Christina has a list. Can you think
2 of anything else? I just wanted to say, this
3 was like a promo or a grabber to get you to come
4 to this workshop. I find the more community
5 members that attend, the better workshop we can
6 have, and I think it's a good time to have a
7 dialogue about risk assessment, and I find it to
8 be a great education process, not only for
9 myself but hopefully for every one of us.

10 Also, I wanted to let you know that
11 I'm going to be around at the break, so if you
12 want to ask me anything about risk assessment,
13 feel free to come up and speak with me. And I
14 look forward to meeting with you all in the
15 future.

16 CO-CHAIR NELSON: Just a
17 clarification, did you want people to fill out
18 the cards tonight for you to respond to, or to
19 bring them to the workshop?

20 DR. SERDA: Actually what I would

1 like to do is tonight if you have any questions,
2 write them down. At the workshop you will be
3 given an opportunity as well, but since we are
4 in the preparation for our presentation, and I
5 thought it -- I wanted to make sure I address,
6 if you have any pressing concerns, that I
7 address them now in the presentation.

8 CO-CHAIR SULLIVAN: Well, Sophia, if
9 anyone has any additional questions that come up
10 after tonight but before the workshop, if they
11 get them to us so that we can get them to you,
12 you'll still be able to have a heads up on that.

13 DR. SERDA: Certainly, I'm open to
14 that. Thank you very much.

15 MS. VEDAGIRI: Will you be speaking
16 about the risk assessment process in general in
17 more detail, or is your workshop going to be
18 geared to Treasure Island?

19 DR. SERDA: Actually it will be a
20 general -- it will be an overview, laying out

3 1 the four -- the process of risk assessment
2 within a working example. As you know the
3 Treasure Island risk assessment is going to be
4 up in August, but the document isn't finalized,
5 but I have an example that we can work through
4 6 that is actually a risk assessment example.

7 MS. SMITH: Excuse me for
8 interrupting and speaking to another community
9 member but is this our interim meeting?

10 CO-CHAIR NELSON: This is our
11 interim meeting.

12 MS. SMITH: Then you will be
13 attending our interim meeting to do your
14 presentation?

15 CO-CHAIR SULLIVAN: There's normally
16 a meeting between -- we normally have an interim
17 meeting between regular meetings, but since this
18 workshop is scheduled, we'd either, you know,
19 take the place of, or if you had some other
20 business to be conducted we might have to adjust

1 the schedule for that. We'll work out -- we'll
2 have to have some discussions about working out
3 the final details of the scheduling of the
4 workshop tonight.

5 CO-CHAIR NELSON: It just happens to
6 fall on the second Tuesday, which is our
7 normally-scheduled meeting.

8 MS. SMITH: It may work fine, it was
9 just a confusion among us as to if this is our
10 interim meeting or not.

11 MR. HEHN: Do you have any idea how
12 much time you're going to allocate to that?

13 CO-CHAIR NELSON: On the 9th?

14 CO-CHAIR SULLIVAN: Do you have --

15 DR. SERDA: I think it's -- we're
16 planning to present about two hours.

17 CO-CHAIR NELSON: That might be
18 an --

19 MS. SMITH: I think that what they
20 did before was --

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1 CO-CHAIR NELSON: Would that include
2 questions? I guess we can discuss this under
3 organizational business, but we can discuss it
4 at that time.

5 MS. SIMONS: This is -- I know how
6 many people attended the workshop in ecological
7 assessment, but this is similar. I would
8 probably say you wouldn't want to discuss other
9 things at the same night because it's a lot to
10 talk about even in an hour. I think we were
11 planning on about an hour presentation and then
12 about an hour for discussion, is that for
13 questions and stuff like that, something like
14 that, so I probably think it would be okay to
15 dedicate one night to it.

16 MS. SHIRLEY: Can we invite other
17 RAB members from other -- members from other
18 RABs to this workshop? I'm thinking in
19 particular of Hunters Point, since we have five
20 risk assessment at Hunters Point.

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CO-CHAIR NELSON: Do you know whether or not the Hunters Point RAB has its own means to have such a workshop?

MS. SHIRLEY: No way, no, much too -- it has a lot of problems there, but it wouldn't be many people, one or two.

CO-CHAIR SULLIVAN: We can work with you, Christine, on that.

MS. SHIRLEY: Thank you.

CO-CHAIR SULLIVAN: Thank you a lot, Sophia.

MR. KAO: As my first business of being a project manager for this site, I kind of brainstormed sessions with Sophia and Christina and I was hoping the questions were brought up in this forum tonight to clarify some of the objectives of this workshop. When we talked about it, I think I wasn't in the previous meeting so I was listening to both of them express that this workshop is going to be geared

4 1 to more of a scientific approach in risk
2 assessment but will not have enough time to move
3 into how to decide -- how to make a decision on
4 cleanup level. Is that what we talked about,
5 and that's where I had a little question about
6 whether that's what this RAB would like to see.
7 And that's why I want to bring this issue on the
8 table, so we can see what kind of response we
9 get.

10 MR. WONG: Maybe Sophia wants some
11 clarification?

12 DR. SERDA: I think the risk
13 assessment -- you know what risk assessment is
14 only one component of developing cleanup levels.
15 The workshop would be solely dedicated to the
16 risk assessment process and working through an
17 example. And that was our intention.

18 MR. HEHN: It seems to be an ongoing
19 question of concern within the RAB of how those
20 cleanup levels are established, and even if

1 they're not site-specific, how they would feed
2 into establishing those cleanup levels as part
3 of the risk assessment. And not necessarily
4 just for Treasure Island, but for any site in
5 particular, or in general.

6 CO-CHAIR SULLIVAN: We were planning
7 to have either a special workshop or an
8 educational or main topic to discuss cleanup
9 levels. We just weren't -- we just don't feel
10 at this time as early as we are in our RIFS
11 report that by about another two months or so
12 we'll be in a position to be able to present a
13 discussion of cleanup levels.

14 MR. HEHN: Specific to Treasure
15 Island.

16 CO-CHAIR SULLIVAN: Specific to
17 Treasure Island, ecological workshop, human
18 health assessment workshop are building blocks
19 leaning towards that.

20 MS. SMITH: But I think what I heard

4 1 from Tom, and it's been a concern of mine, is
2 there are certain chemicals of concern that
3 don't have defined hazard limits, and we didn't
4 really get into that with the ecological risk
5 assessment because they're not supposed to
6 contact human beings.

7 Is there going to be a time at which
8 we do discuss how do you choose -- okay, you got
9 this chemical over here that's on Treasure
10 Island but there's no standard for it, how do
11 you go about determining some kind of health
5 12 risk standard? Are you going to do that for the
13 RAB or is it just going to be let go?

14 CO-CHAIR NELSON: Sophia, is that
15 something that can be addressed in the workshop?

16 DR. SERDA: If I may interject
17 something here. In the risk assessment
18 presentation you can talk about chemicals which
19 toxicity information are available and how
20 they're evaluated at sites. We can cover that.

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1 As a matter of fact, I'm planning to do that.
2 Also, we are not just going to leave you hanging
3 about risk assessment and showing it's not
4 connected to the environmental process. But
5 we'll present a slide or two, how it fits into
6 cleanup levels so it's not done in isolation.

7 MR. HEHN: And that step you're
8 looking for doesn't have to be specifically for
9 here, but what's the next step after you get
10 that risk assessment done, is where do you go
11 from there.

12 DR. SERDA: Yes, of course.

13 MS. SIMONS: I just wanted to say
14 that you guys have talked about this a lot, that
15 since the human health risk is just part of how
16 we set cleanup levels, that they can definitely
17 discuss how it plays a part there. But then in
18 terms of the other factors, we will probably
19 have another meeting to discuss that.

20 CO-CHAIR SULLIVAN: Okay, thank you

5 1 very much. Our next discussion is from the
2 Regional Water Quality Control Board, and I'll
3 turn it over to Gina.

4 MS. KATHURIA: Good evening. My
5 name is Gina Kathuria. I'm with the Water
6 Board. At the request of the RAB I've asked
7 Kevin Graves to come and talk briefly about the
8 Lawrence Livermore study and how it's influenced
9 current Water Board regulations.

10 I believe this will be the first of
11 many presentations on this topic, the topic
12 being petroleum issues at Treasure Island.
13 Kevin Graves is one of my co-workers at the
14 Water Board. He has been intimately involved
15 with the Lawrence Livermore project. Kevin
16 works in the toxic division and handles
17 primarily (inaudible) and has been a guiding
18 influence in the new direction of USDA policy.

19 In addition, Kevin is working with
20 redevelopment agencies, local, state and federal

1 regulators, to implement risk-based corrective
2 action for sites in the city of Oakland.

3 And there's copies of the
4 presentation, the slides at the end of the
5 table, if there's any left, at the end of that
6 table.

7 MR. GRAVES: I see a stack down
8 there. This projector is a tad small for this
9 room so you people in the back are going -- you
10 may want to refer to the hard copies there.
11 This is a compilation of a number of
12 presentations that I've been giving throughout
13 the Bay Area recently, so you will find that
14 there's a little bit of overlap in some of the
15 slides, and also that the page numbering isn't
16 necessarily going from front to back. But bear
17 with me on that.

18 First I'd like to do a little
19 historic view of the UST cleanup program.
20 Started back in the early '80s following the

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super fund program, and paralleling it in the San Francisco Bay Region we had a number of large solvent spills, the IBM cleanup, the Fairchild solvent, PCB and TCB, those types of chemicals that were from underground storage tanks.

Our regulators looked at that and said, wow, maybe these underground storage tanks are really a problem, and in looking around, the more we looked, the gas stations were the predominant source of underground storage tanks. There was more of them than there were the solvents developed along with the federal regulations to come up with a program.

But it's instructive to think about it in that light because the super funds regulations were very proscriptive, they were very intensive about pumping and treating and hitting things very hard up front because it was only a matter of time before this stuff reached

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1 a well, and if we didn't really look at a lot of
2 times what the contaminants were or how they
3 behaved in the subsurface in the long term, but
4 we were worried about the short term, and we're
5 going to get right on the problem.

6 So we applied aggressive strategies
7 up front. Then we did that for a few years. In
8 Region 2 we realized that the petroleum site,
9 the wells had been affected. Could look down in
10 the Silicon Valley and we could see that there
11 were wells that had been shut down because of
12 solvents, but we didn't have any that were shut
13 down because of petroleum, and we looked around
14 in other areas of the bay where there was
15 widespread petroleum use, because there's gas
16 stations everywhere. We didn't see domestic
17 wells really impacted either. So we knew that
18 anecdotally.

19 We also knew that most flows occur
20 in shallow ground water, and when we looked at

5 1 the actual plumes for petroleum, they hit the
2 first aquifer where they stayed there, versus
3 the solvents that traveled on down because they
4 were sinkers. They're heavier than water, down
6 5 to the lower aquifers where they really could be
6 a problem for the wells.

7 We also saw that when the sources
8 were removed for petroleum spills, that the
9 plumes tended to stabilize, but for the solvent
10 side they didn't, they continued to go, and so
11 we saw this dichotomy, and we also saw the cost
12 effectiveness of the remediation was often not
13 there. And that led us into our containment
14 zone policy which I'll talk about a little
15 later.

16 Policy history in Region 2 started
17 off with the LUFT manual, back in '89, that was
18 supposed to be the defining document. I don't
19 know -- is anyone familiar with the LUFT manual
20 here? Okay, we have a few.

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Mostly it evens out the short leg on tables at this point. Isn't really used much any more. Developed in '89, based upon what we knew in '89. But a lot has happened since then.

In 1990 we came out with tri-regional guidelines which was a closer look, more details about how many samples to take, where to take them when you're pulling tanks, when do you need to do a soil and ground water investigation, but not how to do the investigation or when to stop or how to remediate or when to stop that remediation. So there is kind of a gap in the guide that's out there.

The Basin Plan Amendment that I've listed here starting in '92 were the containment zone policy or noncontainment zone, that was mainly built around the solvents, what we learned about solvents, that oftentimes it was we could not clean them up, no matter how hard

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we tried, we just couldn't run enough four volume through, and it was a recognition that that was a technical feasibility.

And that the cost was inappropriate in many cases for cleaning these things up. So it was a different style of management, and that's currently up to the state board being looked at in the policy guide of 1989.

But in those Basin Plan amendments we referred to petroleum as different. They were lower risk, they were different in that they stabilized, and it's the key that we are looking at this stuff back in '91 and '92 in Region 2 here, that petroleum is different than solvents.

In '94, there was the heating oil tank letter that came out in Steve Richards' signature that in essence said we don't want to regulate underground storage tanks for residential home heating water. It was

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recognized that they were generally historic in nature, that they had happened a long time, and if they were going to impact something, it probably would have already.

They were less (inaudible) because they were heavier, more diesel rather than gases, they were less toxic, they didn't have the (inaudible) and the aromatics in them, so we looked at it from the overall program and says, you could probably just let these things go, so that's what we are doing.

In '94, Randy Leeding of our staff looked at Napa County. He was a Napa County case handler, and he was getting a little frustrated because all the sites that came across his desk were small, little sites with small, little plumes, and he joined the Board because he wanted to go out there and save the environment, and he wanted to do some good, and all he was getting were these little cases.

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And so he looked at Napa County from the statistical basis, trying to figure out how long the plumes actually were. Well, he only got about 30 or 40 cases that he could actually determine the plume line, but in all of these they were -- 85 percent of them were less than 100 feet in length, and all of them were less than 200 feet, so that was -- he got to thinking and said, wow, this is something.

What we did, we took that and shopped it around statewide and found out that there were other people interested in doing that study. And that was the start of what we called the plumathon and Lawrence Livermore statewide plume study. So that originated in Region 2. And our supplemental instructions came out in '96.

So you can see we have a history in Region 2 for doing this kind of stuff, and you'll find that our work parallels Lawrence

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1 Livermore in a lot of ways. The process that
2 Lawrence Livermore went through, they got a
3 mandate from the state board to go out amongst
4 the masses and learn what they could about the
5 underground storage tank program in California
6 and make recommendations to improve that. They
7 had been getting a -- state board had been
8 getting a lot of heat from the legislature, from
9 the ERC, the Environmental Resource Council,
10 from all other different sides about, hey, this
11 thing isn't working, something needs to be fixed
12 here and if something doesn't get fixed, well,
13 we'll fix it for you.

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14 Well, soon after that contract came
15 out, the SB1764 came out from the legislature
16 which did indeed say, we're going to make some
17 changes, and there's a 1764 committee that's
18 currently going on up in Sacramento that's
19 investigating and going to give its
20 recommendation on how to fix the program.

7 1 Probably first of April-ish, that's
2 going to be coming out, so that's something to
3 watch. But they looked at -- Lawrence Livermore
4 looked at white papers that were submitted to
5 the 1764 process. They looked at the testimony
6 that was given in that process, they did the
7 case study that we'll talk about, the plumathon,
8 1500 cases statewide they looked at to see what
9 was the magnitude of the impact from these 1500
10 cases.

11 And they did personal interviews and
12 looked at correspondence that was out there to
13 try and get the nuts and bolts of what was
14 happening. So it was a large-scale effort, but
15 they did have some constraints on time and
16 money. What did they find?

17 Here's some statistics. 48 out of
18 12,000 municipal wells impacted, .4 percent, not
19 a big number. .5 percent of the tank cases have
20 actually impacted the wells. If you think that

1 number is high, because when we go back and look
2 at those (inaudible) 36 cases, many of them you
3 can't find any reference to a well being
4 impacted. You would think that it would show up
5 on maps, you would think it would be in the
6 text, but in many of them we can't find them.

7 In one of them, for instance, in
8 Fresno, it was listed as a well impacted by a
9 UST where there's no USTs around. It's a high
10 school and a well is in the shed where they keep
11 the lawnmowers, and when you go into the shed it
12 smells like gas. So now, it's definitely
13 impacted by petroleum, but was it from a UST?

14 And many of those sites were added
15 to the data base, so we think this number is
16 actually a little high. They found that
17 petroleum rapidly degrades the subsurface. The
18 pump and treat is often ineffective at reaching
19 MCL. Try as hard as you can, you can't get to
20 it. They looked at the economics as well. And

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1 4.5 billion is estimated to clean up the tank
2 cases in California. Three billion dollars is
3 estimated to be collected. Now, the three
4 billion is a fairly good number because the
5 legislature can tell just pretty much to the
6 penny how much money they're going to have
7 because of the taxes that come in, and how much
8 they give out. But the cost of cleanup is a
9 very fuzzy number and many people think that 4.5
10 billion is really too low, that it uses the low
11 end of the spectrum so that our deficit will
12 actually be much higher.

13 And that deficit is really what's
14 driving a lot of these changes in policies. We
15 are recognizing just as like on the solvent
16 side, that it isn't going to be achievable or
17 even in society's best interests to spend these
18 resources. But there's probably a better way to
19 do business, so we need to go and find that way
20 of doing things.

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The average cost of cleanup, \$637,00 per acre foot. \$900 is what it cost if you wanted to desalinate bay water, so how much is it worth to clean up that from the view standpoint of drinking water.

One of the key points that I think they found was that nine percent of the releases are less than 250 feet away, and that corresponds very well with the Napa County study that we saw and other people --

You should note, though, that 10 percent should be longer, and so if you have 100 cases, you should expect 10 of them to be longer than 250 feet. So it's not that all cases are small and all cases are low risk, they're just looking at what the percentages are.

CO-CHAIR NELSON: Do you have a question?

CO-CHAIR SULLIVAN: Dale, we'll be able to take questions and discuss things more

7 1 in-depth after the presentation, so we can --
2 we'd like to get through the presentation.
3 Thank you.

4 MR. GRAVES: So what did they
5 conclude? Petroleum impacts are not as bad as
6 was once suspected. That's fairly easy. The
7 cost of many cleanups is inappropriate when you
8 compare it to the risk that these pose to
9 society and to the environment. They should
10 utilize passive bioremediation whenever
11 possible. Not in all cases, but whenever it's
12 possible, there's a distinction there, and then
13 we should modify and implement what's called
14 ASTM or risk base corrective action, which is a
15 protocol that's being looked at nationwide as a
16 framework for guiding risk-based corrective
17 action, as soon as possible. And that's ongoing
18 now.

19 MR. ALDRICH: Could you just explain
20 what passive bioremediation is? Is it doing

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nothing, or is there something else that you do?

MR. GRAVES: Passive bioremediation is, quote, unquote, doing nothing in that indigenous microorganisms, the bugs that are in the ground and around the environment, eat petroleum. Petroleum is a natural substance and it degrades over time, even if you do nothing at all. If you spill gas -- if you spill your lawnmower on to your grass, there are bugs that are down in the grass and in the soil that will biodegrade that. Even if you did nothing at all. That happens, it's widespread and it just happens. Now, you can speed that up by increasing oxygen, by adding nutrients, and it happens to be a limiting factor, but if you do nothing it does indeed occur. That's what we call passive bioremediation.

MR. MCDONALD: Would you care to correct your characterization that petroleum is a natural substance? Raw crude oil is a natural

8 1 substance but I don't think we've found kerosene
2 and gasoline or other manufactured derivatives
3 of crude oil natural.

4 MR. GRAVES: Well, they behave the
5 same way, if they are distilled. You take crude
6 oil and that you distill it, you separate it
7 into different fractions, but the actual
8 components are still there. Now, there are some
9 that are made in the refining process,
10 definitely, but as a whole, we still lump
11 gasoline and diesel and jet fuel and all those
12 things as petroleum, and for the most part, I
13 look at them as being a natural substance, yes.

14 MR. MCDONALD: Are there other
15 additives that are being added to gasoline that
16 are used for fuel efficiency that don't degrade
17 and behave quite differently and they're the
18 subject of a USEPA investigation right now?

19 MR. GRAVES: NTBE is what you're
20 referring to, and we can talk about that in the

1 question/answer period.

2 So when you look at the conclusions
3 for Region 2's point of view, of their point of
4 view, they haven't gone out and changed the body
5 of work or body of knowledge that's out there,
6 it's not new things for us, and this is just a
7 substantiation of what we've been seeing in
8 Region 2 for many years now, and that's in our
9 record here of our policy decisions and the way
10 that we've been handling our cases. So old news
11 there.

12 So what did we do in response to
13 that? Most of our policy work had been going
14 along the line of solvents because that's where
15 the majority of the cost was being spent on
16 individual dischargers, that's where most of the
17 environmental concern was as far as wells, and
18 petroleum was kind of a step child program. It
19 just continued along, didn't get a lot of
20 attention.

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But now the new politics of the situation from the state board and the legislature were focusing more on it, and with the Lawrence Livermore report that came out, we put out what we call supplemental instructions response to it. They made the distinction of low risk versus high risk but they didn't really define what low risk was. So we made an attempt to define what low risk was. It's an interim guide that we came out with.

The source is removed, the site is adequately characterized, the plume is stable, there's no threat to the surface water or deeper drinking water aquifers, there's no threat to human health, no threat to the environment, and I should say there's no significant threat because there's always a threat. You can always numerically calculate that there's some threat, but no significant threat. That's what low risk is, a low current risk here. And if you fit

1 into that category by meeting these things, then
2 there's specific things that you can do to
3 manage your site.

4 MS. GLASS: Is it a significant
5 qualifying?

6 MR. GRAVES: Yes, it can be
7 qualified.

8 MS. GLASS: Is it quantified?

9 MR. GRAVES: We don't put down
10 numbers, significant means different things in
11 different situations.

12 MS. GLASS: But standards exist for
13 that?

14 MR. GRAVES: Yes. So if you could
15 turn the picture into low risk now, what would
16 you do?

17 If you have not impacted ground
18 water, if you're a soils only case, close the
19 case, you're done, there's no risk, there's no
20 threat, why should you continue spending money

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at the site? Now, if you add ground water impact, you need to look at that impact and you need to look at when the water is going to be used and the threat that it causes to that beneficial use, which you use the term.

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If the biodegradation is going to take place faster than the water is going to be used, then you close the site. If there's a chance that you're going to use the water before that biodegradation takes place so you need to know the rating so you need to have monitored for a while and see that it's going down, then you close it. If it turns out the water is going to be used sooner and you're not low risk any more because you have an impact and you need to go do some kind of further remediation.

MS. GLASS: Is there a consideration of the cumulative effect, for example, here's a small well, no problems, here's a small well, no problems, here's a small well, no problems, all

1 three together the water has to be gotten -- a
2 significant amount of water has to be gotten
3 out?

4 MR. GRAVES: If you have impacted a
5 well, then it's not low risk. We're talking
6 about a size where there is no well impact.

7 MS. GLASS: But in the ground water
8 case.

9 MR. GRAVES: Just because the ground
10 water is there, just because the ground water is
11 impacted doesn't mean it's in these wells.

12 CO-CHAIR SULLIVAN: We can get into
13 more questions during the Q and A period.

14 MR. GRAVES: I'd like to go over
15 what I think some misconceptions are about the
16 report. They are focused on large plumes, and
17 this was supposed to be a large plume site, it
18 wasn't. It was a snapshot of a cross section of
19 plumes. It's not a detailed look at various
20 remedial strategies either. It doesn't compare

9 1 the effectiveness of vapor extraction versus
 2 hydrogen peroxide injection, versus
 3 oxygen-releasing compounds.

 4 It looked at the economics of active
 5 remediation as a whole versus the economics and
 6 the impact of not doing something as a whole.
 7 It didn't take a detailed look at fate and
 8 transport either. It basically said, what is
 9 the outcome of the fate and transport process,
10 integrated to plume length? Regardless of how
11 that happens, what were the impacts. And it
12 didn't look at all hydrogeologic scenarios
13 either. It focussed on alluvial valley, of
14 which the Bay Area is an alluvial valley,
15 Central Valley, fractured rock cases, didn't
16 look at those at all.

 17 And it's not meant to be detailed
18 guidance here so you hear a lot of criticisms
19 about these type of things, it should have been
20 this, it should have been that, it wasn't

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1 intended to be, so what I think it is, it's a
2 broad overview of the impact of petroleum so
3 that we can understand how much program we need
4 to have, how hard we need to hit this, and it
5 also looks at the financial impacts, it says,
6 how much are we spending, were these benefits
7 that we are getting, how much is it really
8 costing us so that we can know and make
9 appropriate decisions.

10 And then looked at all well
11 characterized releases, factually, or random
12 samples of well characterized releases, it
13 didn't look at ones that everyone agreed
14 continued to run on and we didn't know how long.

15 And it didn't look at MTBE. It
16 didn't look at vertical gradients, and it didn't
17 look at bioremediation indicator parameters.

18 The most part, because regulators
19 have not asked for that data, it could only
20 access the data that regulators had asked for in

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the past, the historical data, and since we haven't been asking for it, since vertical gradients are not present in most cases and we don't ask for that data, it wasn't around for them to look at.

What do I think it says between the lines? I think it says the finance resources are often misallocated, that we have a program here that we spend lots and lots of money on but we are spending it in the wrong places. We still need to spend money, we still have a lot of sites out there that are going to be impacted, but those are the ones we should be spending our money on, not the ones that are just sitting there.

I think it also says that the current way we do beneficial uses and the way we look at our water resources is probably outdated, and that if we use the current ways of thinking and current information that's

1 available to us, we would probably do it a
2 little bit differently, we wouldn't do it a lot
3 differently but we would be able to modify some
4 of the concepts.

5 For instance, the uses of shallow
6 ground water. Maybe shallow ground waters in
7 some cases isn't really a municipal water supply
8 connection. I think it says that ASTM RBCA is a
9 good framework and that we should use it. We
10 should use risk base corrective actions, that
11 that is how we determine which sites need to be
12 worked on, and which sites don't. I think it
13 also says that from a number of different
14 perspectives, petroleum from UST isn't a big
15 problem.

16 If we zoom out to 30,000 feet and
17 you look at ground water in the state of
18 California, when I do that and I strip away the
19 soil and I see the grand water table, I see big
20 cones of depression out around Sacramento and

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Lodi and Modesto where they're overdrafting their aquifers and they have drawn down the water table in those areas. But when I look at the petroleum pollution plumes, there are these little specks but they aren't damaging the water supplies and resources, whereas there are other things that are damaging the ground water resources. Pesticides, DBCP out there. There's a tremendous problem on a regional basis. We have solvent pools that you can see from 30,000 feet, but you don't see a lot of petroleum plumes because they're stabilized.

If you're a drinking water well and you look around for a petroleum plume, you don't see them, because drinking water wells are mostly in the deeper aquifers and the petroleum plumes are in the upper aquifers and they also aren't around wells necessarily. That your gas stations are mostly along the corners on El Camino Real and East 14th Street, and your well

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heads are often in protected areas. We have well head protection programs, so if you're a well street you don't see plumes either.

So for most of the time, if you're a newt or a salamander or a clam, an ecological receptor, most of the time you don't see a release from a UST. That most UST, looking at California as a whole, are Central Valley, they're off away from the bay fringes.

Now, Treasure Island is a special example because you do have USTs near your marinas and near your edges, so it's going to be interesting to see how those impacts come out in this particular case.

What does the future hold? I think you'll probably see future guidance coming out. We're currently working on verification monitoring. What does long-term monitoring mean? Well we have a lot of good buzz words that we use, long-term monitoring is one of

10 1 them, but how long a term is that? Is that a
2 quarter or a year, or how many samples, well,
3 how many wells? We don't really have a clear
4 picture of that.

5 We do on a site-specific basis, but from a
6 program basis we are working on that guidance
7 right now, and we can expect that sometime here
8 in the next few months. I think that you could
9 expect Lawrence Livermore to come out with some
10 type of risk base corrective action process in a
11 draft form in the summer for use on a small
12 basis by DOD sites that want to use it and
13 civilian sites that want to use it to test drive
14 that before it really gets promulgated, and I
15 think that you'll see not only 9249, which is
16 the state board's resolution amended, but I
17 think you will also see the legislature making
18 some kind of inroads into what they think the
19 UST program should look like.

20 Probably through the fund, probably

1 through chapters -- excuse me, forms as well.
2 My crystal ball is as hazy as anyone else's, but
3 I'm going to go out on a limb here and tell you
4 what I think.

5 Now, I've got a number of other
6 charts here that I could go through but I think
7 that I'm going to stop there and take questions,
8 because sounds like people have some questions.

9 MR. ONGERTH: Could you explain what
10 the status of this material is? Does this
11 represent your thinking, does it represent staff
12 position, does it represent the board's
13 position?

14 MR. GRAVES: If you look at the six
15 points that we went through, what is a low risk
16 site, that is out of the executive officer's
17 signature. So the reasoning, what I've tried to
18 do is give you the reason behind why we would
19 come out with a low risk rationale. So that's
20 the executive officers that she's allowed to

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1 speak to the board.

2 MR. ONGERTH: So the totality of
3 this document, is it a staff product --

4 MR. GRAVES: Is a staff product,
5 it's my product. I did the slides.

6 MR. HANSEN: I thought your
7 presentation was excellent and I congratulate
8 you for it. However, Livermore is a national
9 laboratory. If they were commissioned to do
10 this study by Region 2 --

11 MR. GRAVES: By the State Water
12 Resources Board.

13 MR. HANSEN: Are these results
14 accepted nationwide?

15 MR. GRAVES: EPA has a fact sheet
16 out on them which basically agrees with them.
17 It's undergoing significant peer review right
18 now in addition to the peer review that it went
19 in the lab itself. So I think that it's
20 becoming one of those talking points throughout

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1 the nation. And I think that you're going to
2 hear about it more and more as time goes on.

3 MR. HANSEN: It's in the public
4 literature now?

5 MR. GRAVES: Yes, you will see
6 newspapers articles referring to it from both
7 ends of the spectrum.

8 MR. HANSEN: But where is it
9 published, is it in a scientific journal?

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10 MR. GRAVES: No, no, no, it was a
11 submission to the State Water Resources Control
12 Board as a contract item, it hasn't gone out --
13 when you say the public format, although it is
14 available if people want to have it.

15 MS. SMITH: It's a draft item.

16 MR. GRAVES: When you say "it is a
17 draft item --"

18 MS. SMITH: It's a draft, I mean
19 9249 is a draft item.

20 MR. GRAVES: Yes, it is.

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MR. HEHN: Concerning 9249, what do you think the acceptance of that is on the state level is going to be considering long-term changes that have happened with non-containment zones? We've been going at that for a few years now. How do you think that's going to be accepted, and then as a follow-up on that, what's the acceptance on the interim guidance on a local level, local implementing agencies?

MR. GRAVES: 9249, my crystal ball, once again, is as hazy as anyone else's. I think that it probably would have gotten passed by now, and adopted by the state board with the containment zone policy pretty much as it stands, if petroleum had not hit the fan, so to speak. There's a lot of political heat now from the legislature, from a lot of other places that something be done with state policy regarding petroleum. And the general consensus of the state board is that 9249 is going to be the

1 first vehicle for that to happen in, so as soon
2 as the 1764 committee comes out with its
3 recommendation in April, I would envision that
4 May you're going to see something on state board
5 agenda, probably a workshop, that has to do with
6 what kinds of things, maybe even having draft
7 labor shop, I don't know.

8 As far as your second point is, as
9 far as acceptance on the local level, there's a
10 learning curve going on. A lot of locals are
11 skeptical of change, they don't have -- I just
12 gave a broad -- the history of what our Region 2
13 policy history has been. They don't have the
14 benefit of that, and the benefit of the
15 knowledge that's been gained over time.

16 So there's a significant learning
17 curve that we're undergoing, and there's a Shell
18 Oil, our office, the state board has been
19 putting on risk base corrective action seminars,
20 fate transport petroleum seminars, to try and

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raise the playing field as far as basic knowledge goes.

MR. WONG: Just a couple simple questions, I guess. What does ASTM stand for?

MR. GRAVES: American Society Testing Materials.

MR. WONG: And is the RBCA part of the risk base corrective action, is that in any other terms simple cost benefit analysis? It seems to me from what you said here, like here are these numbers, 600 and some thousand dollars, zero tolerance for any risk essentially, and now what this is in effect saying is let's do some cost effectiveness analysis to see (inaudible.)

MR. GRAVES: Yeah, I think that on its simplest form it's that, it's a cost benefits analysis. But it's more. It gives you a framework for how to do that. Specifically builds around a process of where you pull the

1 underground storage tank, what decisions do you
2 have to make? It steps you through the
3 decisions that you have to make.

4 So rather than saying it's just cost
5 benefit analysis, it's cost benefit analysis
6 that's specific to underground storage tanks.

7 MR. WONG: You mention on page 10
8 there the financial resources are often
9 misallocated. You know, again, this kind of
10 comes into the cost benefit. Whose resources,
11 and again, I'm coming from a public policy
12 standpoint, if Chevron has some leaking
13 underground storage tanks and something like
14 that, is this a proper industry stance, could it
15 be construed that way?

16 MR. GRAVES: When I say financial
17 resources, most often I'm talking about the
18 cleanup fund, the state cleanup fund. There is
19 a tax on gasoline that pays for underground
20 storage tanks to be cleaned up. And that's even

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if it's on private property. It is specifically meant for private property, it's specifically meant for private owners of tanks. 85 percent of that money goes to non-major oils, 15 percent goes to major oil clients, and legislature has set that fund up because of federal guidance of financial responsibility guidelines. And it's there for everyone to use.

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MR. WONG: So that might answer my last question is it's simply then who assumes the risk if this gets implemented if over time the plume, you know, originally was found not to be moving, but then because of heavy rains or floods or something it all of a sudden moves into water tables or something like that, but if the state's paying for this, and I assume the state's accepting the risk, especially if it's a transfer of ownership.

MR. GRAVES: The state pays the bill. There's \$5,000 deductible and the state

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1 pays for the rest, so that's a fairly heavy
2 part. However, the liability remains with the
3 responsible party. It is an insurance fund,
4 essentially. And that if you're a tank owner,
5 it's your responsibility to get it cleaned up.
6 However, you can submit your bill for
7 reimbursement to the insurance company which is
8 the state of California, and everyone pays for
9 it through everytime they buy a gallon of gas.

10 MR. WONG: If they cleaned up
11 according to your guidelines then, and I know
12 this kind of forecasts in the future, I would
13 assume the environmental case law would change
14 because people would say, no, we did what was
15 required of us, we're not liable for it.

16 MR. GRAVES: Well, I'm not going to
17 predict what case law will say.

18 MS. SMITH: I have a number of
19 questions. Do you feel that the Metropolitan
20 Water District of Southern California needs to

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1 be brought up to speed on the fact that they
2 don't like 9249? They're opposing your
3 implementation of this as it does not -- it
4 fairly impacts the quality of water and the
5 quality of life in southern California. You
6 made repeated mention of the fact that it was
7 going to be small people who didn't understand
8 the nature of the law, but the Metropolitan
9 Water District is opposing you. Also the city
10 of Berkeley is opposing you. The city of
11 Berkeley emphasizes you shouldn't eliminate that
12 you have a number of governmental agencies that
13 are not comfortable with resolution 9249.

14 You say the plumes are small cases, but
15 Chevron, Shell, Unocal, Dow and Atchison Topeka
16 and Santa Fe are the people who are behind the
17 acceptance of this new kind of proposal.
18 Atchison Topeka and Santa Fe are telling us they
19 have problems with China Basin which they want
20 to develop into a ballpark, and Mission Bay

1 which they want to develop as residential
2 commercial area and they can't do it because
3 it's dirty ground.

4 They also want to do it in
5 Emeryville. Emeryville is going to be entirely
6 condemned as dirty soil under this kind of
7 implementation of law. This is not a little
8 case. This is not a gas station, or a dry
9 cleaners. These are major, multinational
10 corporations that are behind this. It's not
11 little guys.

12 Next the price is overestimated.
13 The city of Berkeley estimates for a little guy
14 to clean up an underground storage tank that has
15 been leaking is \$10,000. It could cost you
16 \$3,000 more if you do not test the soil around
17 the leaking storage tank before you do removal.
18 It would be \$300 more to clean up the soil and
19 remove the soil when you remove the storage
20 tank. If you have to go back and do it, another

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analysis is about a third more, it's not \$153,000, it's 13, if you're talking about little cases.

You have already downgraded soil contaminants and risk assessment three years ago. And now you want to downgrade them more. Shallow ground water is not used for drinking as you say in 9249. Except in an earthquake, guess what's going to happen in the East Bay? We're going to open up all of those shallow wells that were here with the buildings that are over 50 years old. They all have wells, they're all there, I've seen many of them. They're going to be opened, and it's not appropriate for you to say that it should not be -- it's not drinking now but with an earthquake, I promise you, they're going to open them and I promise you they're going to use the water.

CO-CHAIR NELSON: Dale, is your concern maybe how to get these concerns to the

1 public comment arena for 9249, or are you asking
2 Kevin to respond one way or the other? I just
3 want to clarify. I didn't hear a question in
4 what you had asked.

5 MS. SMITH: No, I didn't really have
6 a question. I think that he's misrepresenting
7 the presentation.

8 MR. GRAVES: If I could have a
9 moment to respond, that would be nice. I think
10 I agree with what you're saying when you say
11 that the Metropolitan Water District is against
12 containment zones, and the city of Berkeley is
13 against containment zones, and these people have
14 expressed concerns about containment zones. I
15 wasn't giving a presentation on containment
16 zones. I think that this is different than
17 containment zones. Containment zones are for
18 chemicals that don't drain, that are toxic and
19 that are going to be around for a long time, and
20 we don't have a way of remediating them,

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that's what containment zones are about.

The petroleum pools tend to be smaller, they aren't as toxic, and the toxic stuff degrades with time, so we're looking at this as things that don't need containment zones.

MS. SMITH: But you say the problem is that it cost \$150,000 to remove an underground storage tank. It does not cost that much, especially on Treasure Island, it's not that expensive.

MR. GRAVES: I wasn't speaking about Treasure Island and I don't know about the tanks on Treasure Island, but I think that what you will find with the costs associated with the cleanup are very much more expensive than \$13,000. If you can get a contractor in to pull a tank with a backhoe, but then cleaning up any gasoline that's in the ground water in the soil, that's where the expense is. Particularly if

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1 it's a little bit deeper, and once it's in the
2 ground water, the physics of the situation, it's
3 very difficult to remove that little bit of soap
4 from that sponge, you can rinse it, you can
5 squeeze it out, but you can always get a little
6 bit more in that sponge. That's where the costs
7 come in, not from tank removal themselves.

8 So that I think that all of your
9 comments were very well taken, and apply very
10 well to containment zones, but don't
11 misunderstand the use of containment zones, and
12 in petroleum we don't think is a focus for that.

13 Who was next?

14 MS. GLASS: I had a question to kind
15 of follow on what Brad said. I'm not sure if I
16 understand, and once again I'm not sure this is
17 related to your particular take on this, but my
18 understanding is that there's no particular
19 incentive to not have a problem with UST under
20 this 9249. In other words, somebody else is, I

1 mean, if I have an underground storage tank, I
2 don't care if it leaks or not, but I just get it
3 cleaned up whatever it costs and then submit the
4 bill to the state. Is that what I'm
5 understanding?

6 MR. GRAVES: Under the current law,
7 no changes at all, leaks are paid for by the
8 cleanup fund up to a billion dollars. Anything
9 that it cost, you just submit the bill and it's
10 paid for by the state.

11 MS. SMITH: Could you show me where
12 that is in 9249?

13 MR. GRAVES: It's not a part of
14 9249, it's called the Barry Keene Underground
15 Storage Tank Fund Act

16 MR. HAYDEN: But there is a
17 competitive side to it, there has to be more
18 than one bid.

19 MR. GRAVES: Has to be more than one
20 bid, certainly. There are some procedural or

13

1 administrative aspects. The point that I'm
2 trying to make here is that under the current
3 law there is no incentive to doing it cost
4 effectively. Other than there's a bidding
5 process or whatever, but you can just go back
6 and work plan that says, I'm going to pump and
7 treat my site for the next 50 years and that's
8 my work plan, you can tentatively bid the work
9 plan, even if it doesn't need to be perpetrated.
10 But your characterization is correct.

11 CO-CHAIR SULLIVAN: Just for
12 clarification, this cost reimbursing doesn't
13 apply to the Navy, we pay our own way. Now,
14 though, in effect, instead of paying for it with
15 state tax dollars we are paying for it with
16 federal tax dollars.

17 MR. HANSEN: I don't know if
18 remediation works because you have the microbes
19 there and you have some nutritive soil and all
20 of this good stuff, so if I spilled a gallon of

1 water out in the middle of the desert which is
2 sterile and there's no microbes there,
3 that would not -- bioremediation would not
4 occur.

5 MR. GRAVES: I would disagree with
6 your characterization that it's sterile in the
7 desert. I think when you look at the city of
8 Blythe, when you look at the city of Palm Desert
9 and other desert cities, that there's an
10 incredible amount of biodegradation that takes
11 place there.

12 MR. HANSEN: What I'm trying to lead
13 to is not all the soil is affected, and
14 referring to the soil under Geary Boulevard
15 which I'm familiar with, there are lots of
16 filling stations there so there's lots of
17 opportunities for leakage of petroleum, but
18 there are also a lot of sewer lines going up and
19 down Geary Boulevard, and so sewer lines always
20 leak, everyone knows that, so that you

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1 intrinsically have a lot of nutrients from
2 sewers and that's a very good nutrients, so in a
3 sense it seems to me that the density of fuel
4 tanks is kind of balanced by the density of
5 leaking sewer lines. It makes it sort of a
6 corrective process and this might tend to
7 explain why you tend not to have so much
8 interaction between drinking water wells and
9 those storage tanks.

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10 MR. GRAVES: It could be, it could
11 very well be. Another point that you bring up
12 is the use of shallow ground water for leaking
13 sewer lines, but the fact that it is impacted,
14 and if you were going to use your example of the
15 earthquake in Berkeley, that it shuts down the
16 Claremont Tunnel, there would -- treatment would
17 have to be done to that water because the
18 effects from leaking sewers lines is acute and
19 immediate.

20 You have with the viruses and

1 bacteria that is there, it's acute and immediate
2 and you would know it. Whereas the contaminant
3 levels we're talking about, it takes two liters
4 a day for 72 years in order to have the impact,
5 so if there were an earthquake as an immediate
6 problem you would have the normal public health
7 problem as your first problem, whereas the toxic
8 would be your secondary problem in the treatment
9 of that problem.

10 MS. SMITH: My only point in
11 bringing that up is you said there was no
12 drinking water contact, and that's not an
13 accurate description of the District 2,
14 certainly not in the lower portion of District
15 2, and actually not in Berkeley in District 2.
16 Your characterizations of no contact with
17 drinking water is inaccurate, that's the only
18 point I was trying to make and I'm sorry I
19 wasn't clear.

20 CO-CHAIR NELSON: Thanks, Dale.

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MR. HEHN: In looking at, trying to have a management strategy for using (inaudible) of ground water, one of the things you pointed out was how to monitor for effectiveness of bioremediation. How do you envision what is effectiveness in that particular scenario?

MR. GRAVES: The effectiveness is normally looked at as being a stable plume or a shrinking plume. Then if you have removed your source, if you have a source and your plume starts growing, and it starts growing at the rate that -- because it's overcoming the natural attenuation processes which is absorption and dilution and others things including bioremediation, but as soon as the bugs have enough surface area around your plume as it spreads out and becomes a larger plume in the ground water, has more surface area for them to act on, they will stabilize the plume at the same rate that it's going in. They're eating,

1 it's stable.

2 Now, when you remove the source,
3 they will start to eat that back, so we should
4 be looking for degradation, we should be looking
5 for changes in mass within the plume.

6 Concentration reductions and reductions in
7 aerial extent, based on concentrations, that's
8 the first thing that you look for.

9 The second thing would be either
10 by-products or the consumption of parameters,
11 for instance, we call alternative (inaudible),
12 nitrates, sulfates, ferrous iron, can all be
13 used in addition to oxygen to -- for them to use
14 in oxidizing petroleum.

15 So if you look at background levels
16 of that in the aquifers, you can say, okay,
17 looks like this is a secondary characteristic of
18 biodegradation and it's happening. As the
19 concentration, I see these indicator parameters,
20 looks like it's happening.

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MR. HEHN: How long is that, in a general sense, how quickly does that reaction happen?

MR. GRAVES: I don't want to speak to rate right now because rates is very up in the air right now, but generally you would think that if you had a significant amount of pollution, meaning you had free products around, that you removed your free products and you would be looking at tens of years for that to happen. It wouldn't be months and it wouldn't be years, it would be tens of years. Now, if you never had free products and it was a very localized problem, then you could be on (inaudible) years.

MR. HEHN: One final question is that you talked about the trying to remove the beneficial uses from shallow ground water. What do you see as the timing that their state board might be looking at that kind of a change in the

1 water plan?

2 MR. GRAVES: Not this year, next
3 year. People have different agendas. The state
4 board has its own agenda. We are currently
5 looking at beneficial uses within Region 2. We
6 have a ground water committee which she is on
7 that is looking at San Francisco and they're the
8 basin that presides within the city and county
9 of San Francisco. We're looking at what are the
10 appropriate beneficial uses for those.

11 And you mentioned that Geary Street,
12 assuming that's Geary Street in San Francisco,
13 that's on the downtown basin, is fairly degraded
14 because of leaking sewer lines and all of the
15 contamination through the construction of
16 buildings and leaking underground storage tanks
17 and all sorts of things, that you really can't
18 realistically expect that water to be used
19 because of all of the impact on it.

20 So Region 2, moving out a little bit

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ahead of the pack and we are starting to look at that even ahead of the state board, so slowly but surely.

MR. MCDONALD: Does bioremediation take place more quickly in a damp environment where there is ground water or in a dry environment?

MR. GRAVES: It needs water. It is an aqueous thing. Bioremediation in the soil is sometimes -- I haven't seen the numbers on it but it alludes to it being soil moisture content dependent, so you can expect it to happen faster in the saturated zone, and then where it's not saturated the rate would be lower and somewhat dependent upon moisture contents.

MR. MCDONALD: Does it happen slower or faster with certain kinds of other nutrients, organic matter or other minerals or presence of salt? Does salt water aquifer have a difference than the fresh water aquifer?

1 MR. GRAVES: I haven't seen anything
2 on salt water aquifers. We don't see them
3 around here as far as salt water aquifers. It's
4 a very near bay type of a thing, and we move
5 back a little bit, then you're into the fresh,
6 tends to flow into the bay, so I don't know how
7 salt would impact that.

8 But as far as the other things, the
9 nutrient loading and the other electron receptor
10 availability, definitely.

11 MR. MCDONALD: Can the introduction
12 of microbes be an effective bioremediation
13 technique if the microbes there are sufficient
14 in quantity?

15 MR. GRAVES: Potentially, yes.
16 However, there used to be three lines of
17 evidence that people looked for that the
18 National Science Foundation, I think, put them
19 out, that you needed to have bugs present, and
20 you needed to have the concentration reduction,

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1 and then the depletion of alternative electron
2 receptors, your three lines of evidence you can
3 say conclusively this has happened.

4 Now they kind of backed off on that,
5 the author of that has said the bugs are always
6 there so doing bug count doesn't really tell you
7 anything. There seems to be enough bugs around
8 to do the job everywhere we look, so the fact
9 that adding bugs -- the jury is still out on
10 that, but it seems like it is waning in
11 popularity. The addition of oxygen and
12 nutrients definitely will speed up.

13 MR. MCDONALD: This is definitely
14 aerobic?

15 MR. GRAVES: Aerobic rates tend to
16 be about 10 times faster than anaerobic rates.
17 However, when you look at the total volume of
18 the plume, most of the plume is anaerobic, so on
19 a mass basis, most of the plume is -- more
20 petroleum is being degraded anaerobically

1 because more of the plume is anaerobic.
2 However, you can get that aerobic, it would go
3 faster. With sparging, air sparging, and also
4 hydrogen peroxide injection.

5 MR. MCDONALD: There's a fourth
6 element which is the media that in a clay
7 environment, the bioremediation is going to
8 proceed slower than, say, in the sandier
9 environments. But that's an argument for
10 bioremediation on Treasure Island because this
11 is a sandy environment.

12 MR. WONG: I'm just trying to just
13 relate some of this back to what we are doing
14 here. And my understanding is that it's kind of
15 a two-part process involved here. And this
16 study is dealing mostly with the corrective
17 actions, remediation. In terms of, you know,
18 what's cost effective, how much will we get out
19 of the sponge.

20 If this was implemented would you

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1 anticipate that it would change the scope and
2 the amount of work and thoroughness of
3 investigative part, because part of what comes
4 into all this is site characterization, things
5 of that sort, and I think if you're going to run
6 a cost benefit or risk benefit analysis or
7 something, you can only do that as good as
8 you're at it, so since we are right now in the
9 investigative phase in a lot of things, well
10 maybe not the UST part, would you foresee that
11 there would be some skimping on that end of this
12 process?

13 MR. GRAVES: The second point in our
14 six list, six item list is equal, adequate
15 characterization. What does adequate mean,
16 though? We have yet to come to grips with quite
17 what does adequate mean. Now, we don't believe
18 that you should skimp on the characterization.
19 You need to do enough characterization so that
20 you know what's happening at the site. How to

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1 determine that point when you don't have to do
2 any more investigation is a hard thing. Some of
3 the concept we use is --

4 MR. WONG: Do we think that what's
5 in place now is overkill? I'm kind of reading
6 that there might be some consideration that
7 we're --

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8 MR. GRAVES: I can show you a lot of
9 sites that were overkilled, yes, in the
10 investigative phase that when you're talking 100
11 wells, when you're talking 15 wells on a service
12 station site, that's overkill.

13 MS. SMITH: We are talking about
14 Treasure Island.

15 MR. GRAVES: I'm speaking
16 rhetorically.

17 MS. SMITH: We are speaking Treasure
18 Island. We don't have a hundred wells.

19 MR. WONG: I'm speaking
20 conceptually, I'm trying to get a feel, is it

1 just remediation site or are we looking at a
2 problem redefining what's adequate?

3 MR. GRAVES: I think we need to
4 redefine what is adequate. Some of the thoughts
5 that are presented these days are if another
6 data point isn't going to change your remedial
7 strategy, and another data point isn't going to
8 change your concept of what the risk is, then
9 you don't need that data point. You have enough
10 to proceed with your remedial strategy, you have
11 enough to proceed with your risk prevention
12 measures, and that more data will lower the
13 uncertainty in that decision. You're always
14 dealing with a conceptual model here, and the
15 uncertainty in that conceptual model.

16 MR. WONG: So bringing it to
17 Treasure Island, it's conceivable it went
18 through much wide use and all that. What we're
19 doing now in terms of investigation and all may
20 not be need to be done to the same degree.

1 MR. GRAVES: I don't know what you
2 were doing so it's hard for me to comment on
3 that.

4 MR. HEHN: I'd like to put my
5 comment on that. One of the things that has to
6 be kept in mind too is if you're doing site
7 characterization and you're going to use that
8 kind of approach, you also have to be able to
9 support your case, which means you have to have
10 enough wells, whatever, to show the plume
11 actually is shrinking, to kind of balance other
12 factors off.

13 MR. GRAVES: Absolutely. We're not
14 talking about skimping here, we are not talking
15 about not doing the work, not doing what's
16 appropriate. We're talking about what is
17 appropriate, but not more.

18 CO-CHAIR NELSON: You had a
19 question.

20 MS. VEDAGIRI: My question is sort

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1 of a follow-up to what Brad just brought up.
2 Suppose you actually approached a no-risk site
3 for site closure, and that approval is based on
4 the assumptions that the plume is stable and
5 biodegradation is effective and so on. I'm
6 wondering for a site that hasn't been studied
7 for a long time, that might have 10, 20 years
8 worth of data, your assumptions might actually
9 be based on models of whether the plume is
10 stable and whether biodegradation is occurring.
11 Once you approve it for closure, do you require
12 monitoring always, even for low-risk sites just
13 to make sure for some period of time that they
14 show that the plume remains stable or it's
15 shrinking, do you expect them to validate those
16 assumptions?

17 MR. GRAVES: No.

18 MS. VEDAGIRI: As part of your
19 approval?

20 MR. GRAVES: Once you're closed

1 you've already gone through that portion. What
2 you did when you were an active site is you
3 determined what your rates are, your
4 bioremediation rates, whether the plume is
5 stable, what your land use is, what is your
6 water use, projected water use, you determine
7 all that stuff and then you come to a point
8 where you say, well, it looks like it's stable,
9 it's going down, there's no receptors around,
10 and even if they moved in they wouldn't be
11 affected. Looks like it's low risk, looks like
12 we can't conceive of a way this is going to
13 impact anybody, let's close it.

14 MS. VEDAGIRI: So the fact that it's
15 stable is based on actual data from the site,
16 not just, you know, these are the current
17 concentrations and based on models five years
18 from now we expect that --

19 MR. GRAVES: No, no, no, data, you
20 have got to show that it's stable now, not that

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it's projected to be stable in the future,
absolutely.

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CO-CHAIR NELSON: I think we have a

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real hot topic here and I'm really sensitive to

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the fact that people might need to take a break.

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I'd like to take one last question and propose

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to the rest of RAB that we follow up with

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another more detailed presentation, and thank

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you, Kevin.

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MR. GRAVES: One last comment to

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follow hers up is that if this got more wide use

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and whatever, it is being implemented now, this

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is what we're doing today in Alameda County, in

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Santa Clara County, in San Mateo County, in Napa

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County. This is the state of doing business in

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Region 2, so it doesn't take any acts of the

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state board or whatever in order to close all of

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these sites. Okay.

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CO-CHAIR NELSON: I know we had two

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hands up, Richard and Henry. Henry, you won the

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1 arm wrestling.

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MR. ONGERTH: Just a very brief comment. There's no such thing as absolute purity or safety so there's always some residual risk.

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MR. GRAVES: I should have made that point more clearly. When I talk about no risk, I mean no significant risk, and the term significant, just like adequate is what we (inaudible). Thank you.

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CO-CHAIR NELSON: We will take a 15-minute break, and Kevin is still here as well as Sophia and Christine and they can answer any questions about the human health risk assessment, and we have the cards here so we'll take any cards that you have at the end of the meeting, as well as any other comments you might have after tonight but before the presentation.

(Recess taken.)

CO-CHAIR SULLIVAN: We're ready to

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1 start up again, and we're going to move into our
2 BRAC cleanup process, but in light of the hour
3 we are going to try to pick up the pace a little
4 bit.

5 I just have -- This is just a very
6 brief discussion on the FY '96 budget. In fact,
7 to take a line from Sophia, this is kind of a
8 teaser for upcoming discussion. And this is
9 fairly fresh information. In fact, Paul Hehn
10 and I were in a meeting yesterday at EFA West,
11 met to discuss the fiscal year 1997 budget
12 execution plan, and so as a result, we'll be --
13 we're going to have to discuss about how we
14 structure our meetings over the next month in
15 order to accommodate this.

16 You know, we've been talking all
17 year about FY fiscal year 1994, that we haven't
18 had very much money. Well, we certainly expect
19 that to change next year, and while we don't
20 have the final figures and it's going to be.

1 ultimately pending final adjustments with the
2 federal government as well as what the final
3 congressional legislation is, we expect our
4 budget next year to be somewhere on the order of
5 10 million dollars plus.

6 So what is that going to buy us?
7 And it's going to finish the remedial
8 investigation and feasibility study, it's going
9 to start us on the road to the record of
10 decision, it's going to allow us to remove or
11 close our remaining USTs and get well into the
12 site investigations for our above-ground storage
13 tanks. It's going to allow us to close those
14 USTs which are becoming inactive by base
15 closure, although some will remain in service on
16 operational facilities like the boiler plants,
17 if they continue to operate that way.

18 High interest area is the fuel
19 lines, and that allows us to remove and close
20 the inactive lines. Also to complete our

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1 asbestos survey and to start asbestos abatement.
2 Also to finish up our lead base paint survey.
3 And surveys for PCB as well as what we're
4 referring to as ozone depleting substance in the
5 BRAC Cleanup Plan which is primarily
6 refrigeration as well as fire prevention systems
7 that use (inaudible). And to continue our
8 findings of suitability to lease and transfer.

9 The schedule for the budget will be
10 served upon the regulators, so, and the RAB will
11 be receiving a line item budget sometime in the
12 mid April time frame. And we'll have the period
13 between mid April and early May to -- for both
14 the BRAC cleanup team and the RAB to review this
15 line item budget. And then the composite
16 budget, which is going to consist of Treasure
17 Island as well as all of the other 1993 base
18 closure bases, which are primarily Mare Island
19 and Naval Air Station Alameda, that composite
20 budget is due to, from EFA West, the Navy

1 headquarters by the 20th of May.

2 MS. SMITH: Jim, how long do you
3 think we have if we had the budget available mid
4 April, what, two weeks to comment, two weeks to
5 fuss over it?

6 CO-CHAIR SULLIVAN: At least. The
7 intent of this schedule and the discussions that
8 the Navy had with Cal EPA and the Navy EPA was
9 to involve the RAB in the budget, so the hope
10 was that at the very least it would pick up the
11 time line, the time window would pick up one of
12 the RAB meetings.

13 MS. SMITH: We could beg for more
14 money for you.

15 CO-CHAIR SULLIVAN: Actually
16 primarily it's going to consist of taking --
17 it's actually going to be more of a
18 prioritization effort than a request for money.
19 What the line item budget will look like is a
20 spreadsheet with each project, like investigate

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1 this UST or remove that UST. Each of those will
2 be one line, and the major part of the exercise
3 would be to prioritize those from top to bottom.
4 And this is really the first opportunity that,
5 you know, we've had to be able to do this in
6 concert with the RAB.

7 And I think it comes in a key time
8 for -- a very good time for us in that 1997 is
9 going to be a much better year than '96. So the
10 line items that we'll be looking at are really
11 going to make a significant progress in the
12 cleanup of the naval station.

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13 CO-CHAIR NELSON: You have an item
14 here for the BCT and RAB review. Is there a
15 time to get comment back?

16 CO-CHAIR SULLIVAN: That's what we
17 have to work out the logistics on, and either
18 we'll -- we may not resolve it tonight, fully,
19 but I think we need to -- I'm going to suggest
20 for your concurrence is that we devote a

1 significant part of the regular April meeting to
2 reviewing this budget, and then I think the
3 question will be whether or not there needs to
4 be any kind of a pre-meeting before that or not,
5 or whether or not we have the regular April
6 meeting and then there might need to be a
7 subsequent interim meeting prior to whatever
8 date, which we haven't established yet, whatever
9 date so that we can work it into the final
10 budget, but the end game is that EFA West has to
11 have their budget for the Bay Area to main
12 headquarters by the 20th of May, unless that
13 date changes, somewhere around there.

14 MR. HEHN: When is that FY '97
15 budget again?

16 CO-CHAIR SULLIVAN: The fiscal year
17 1997 budget begins on 1 October, it's the fiscal
18 year, 1 October, 97, but what this really is is
19 part of the overall government budget cycle, so
20 that this budget, when it gets to Washington, in

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1 turn is going to be further adjusted, and we
2 won't know what the final -- what our final
3 budget is for Treasure Island until close to the
4 beginning of the fiscal year.

5 MS. GLASS: You said October 1, '97,
6 you mean '96?

7 CO-CHAIR SULLIVAN: I'm sorry, 1
8 October, '96, the fiscal year '97 starts on 1
9 October, 1996, so this prioritization is really
10 going to be for things that start this October.

11 Any other questions?

12 Pat and I have been talking. In light
13 of the time, I would like to just speed through
14 the next two items. We were going to discuss a
15 little further as a follow on to last month's
16 meeting the administrative record and the
17 information repository, but I don't have any new
18 information on that, and I think we -- you know,
19 we understand what the RAB's concerns are in
20 terms of where the RAB commentary fit in terms

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of this administrative record and this information repository and we'll be looking into that further and we'll have some input to make at the April RAB meeting or some memo guidance that we can provide prior to the meeting.

MS. SMITH: So you want to make that an action item then?

CO-CHAIR SULLIVAN: It's the action item is for the Navy to continue reviewing the regulations concerning administrative record and information repository. And then it was requested that we, in this next item, in the next item, summary of public and RAB comment opportunities in the remedial investigation and record of decision making processes, what I can say in brief and as another action item, action item would be to provide a schedule of public official -- public comment opportunities for the ROI and the RAB and we can do that, but basically when we submit the draft remedial

1 investigation feasibility report, that will
2 trigger the requirement to have a regular public
3 meeting and the same thing will be triggered by
4 the draft ROD. So.

5 MS. SMITH: The draft will trigger a
6 public meeting as well as the final.

7 CO-CHAIR SULLIVAN: There's a public
8 meeting associated with draft proposed for
9 remedial investigation report and the record of
10 decision. But I don't have to go to the public
11 meeting, the draft proposed plan or draft. It's
12 sometimes an option to have one for remedial
13 investigation but not a firm requirement.

14 The only firm requirement is to have
15 it for the ROD, but as an action item we'll
16 provide a chart to show what the official
17 required public commentary periods are.

18 MS. SHIRLEY: I have a question
19 about the plug-in ROD. Is that under
20 development now?

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MR. GALANG: Our contractor has developed a criteria that is now being reviewed by our legal counsel, that's just for the no action items site, just like site 3, didn't -- we're ready to close those sites.

MS. SHIRLEY: Does that have to go through public comment, the proposed plan and all that stuff?

MR. GALANG: Yes.

MS. SHIRLEY: Will the RAB see that as soon as it's available?

MR. GALANG: Yeah.

CO-CHAIR SULLIVAN: Under other business, again in the interest of time, unless there's some specific questions concerning action items, I'd like to defer that until next month, and what we'd like to do is since this always ends up at the end of the meeting, Pat and I discussed we'd like to move review of action items in the next meeting up towards the

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1 top so we can have a detailed discussion and get
2 rid of some of the ones that have been hanging
3 for a long time, so we will do that next month.

4 MR. HEHN: I had a question about
5 one of the action items. What's the latest on
6 our map situation?

7 CO-CHAIR SULLIVAN: The map should
8 be in final development because we were waiting
9 to finish the updates for the BRAC Cleanup Plan.
10 Now that that's done, we'll be making up the new
11 map, and I think we had kind of a ballpark of
12 time frame of around April, I think. We're just
13 waiting for the BRAC Cleanup Plan.

14 Now, move to organizational business
15 and I'll turn it over to Pat.

16 CO-CHAIR NELSON: Well, aside from
17 April 15th being a significant day in April for
18 everyone, it looks like April is going to be
19 pretty busy for us, and one of the things I
20 would like to discuss is whether or not we would

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1 like an interim meeting separate from the human
2 health risk presentation that the EPA and the
3 Navy and the state will be providing us on the
4 9th. There are many options here. We also have
5 a report for which comments are due on the 19th
6 of April, and that's to pay Remediating
7 Technology, so we can do something creative like
8 have part of the meeting on the 9th, address
9 that report and begin a phase one of a two-part
10 human health risk assessment presentation, and I
11 notice your heads popped up so I'm just --

12 We'd like your input to see what
13 would work. And then we also have the budget
14 that Jim has presented to us for which we'll
15 need to develop comments, so while we're
16 thinking about that, maybe we can come back to
17 that after we have a report from Dan McDonald on
18 the interim reuse.

19 MS. SMITH: Can I ask just a quick
20 question? It says that the draft,

1 bioremediation draft is due tonight. Are the
2 subpart --

3 CO-CHAIR SULLIVAN: Copies were
4 mailed to Paul and Pat and I have one copy here,
5 so I'll take anyone who would like to get a
6 copy, I should be able to get in the mail.

7 MR. GALANG: I have three extra
8 copies here with me.

9 MR. HEHN: How firm is that
10 deadline?

11 CO-CHAIR SULLIVAN: It is pretty
12 firm, this isn't really a major document and so
13 we hope that -- we wanted to include you in the
14 comment but none of us actually had very much
15 time to look at this.

16 CO-CHAIR NELSON: Just to clarify,
17 I'm going a little bit out of order because I
18 know Dan had been introduced with Laurie's
19 presentation pursuant, so I wanted to complete
20 that and then move on to the RAB comments on the

19 1 BRAC cleanup and then we can talk about the
2 workshop on the 9th.

3 MR. MCDONALD: Well, very briefly,
4 as Laurie mentioned, there is the
5 reestablishment, re-energization of the interim
6 reuse subcommittee. I volunteered to be on the
7 committee, and to chair it. The goal of the
8 subcommittee is to try to work with the
9 short-term reuse issues while the CRC works on
10 the longer reuse and longer term issues such as
11 reuse plan. And clearly there are a lot of
12 possible uses that are currently with the
13 cleanup goals that can be done sooner than
14 later, and it's going to be kind of a patchwork
15 of things that are happening today and things
16 that the city wants to happen here on the
17 island.

18 The subcommittee is just getting
19 started and it will be working to make
20 recommendations to the CRC, and it's something

1 that we just had our first meeting last week,
2 we'll have our second meeting next week
3 immediately prior to the reuse committee
4 meeting, 3 o'clock on the 1st, so I'll keep you
5 posted, but there's really not much to report
6 because we just got started. Reuse committee
7 meets at 3:30 next Monday.

8 Another thing that has occurred is
9 that a letter has gone out from Nancy Pelosi to
10 the administrator (name inaudible). He's the
11 commander of all naval activities here in the
12 San Francisco Bay Area, requesting a
13 reallocation of FY '96 cleanup monies towards
14 that UST fuel line cleanup project which is
15 ready to go but unfunded. We've talked about
16 that in the past RAB meetings, and we think that
17 that kind of discussion will possibly yield some
18 benefits here shortly. We'll know more probably
19 in the next five or six to eight weeks, if
20 there's any ability to reallocate some of those

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funds, but that could do a lot to start the tank fuel line cleanup, that's already planned and ready to go.

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There's more discussion in the Navy on how to do that. There's also the Baykeeper suit which is underway which has another impact on that same issue, and I don't have any information on where that stands right now but that clearly is talking about some of the same cleanup issues.

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MS. VEDAGIRI: Did she send that letter out because she heard from the BRAC?

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MR. MCDONALD: She sent that letter out at the request of the city. The city requested that we get some assistance to try to push for some additional cleanup funds.

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CO-CHAIR NELSON: Another question. Thank you, Dan, I think we are all very pleased that you were appointed to the interim reuse committee. It speaks well of you, and I think

1 the RAB. I guess going out of order again, the
2 interim meeting report, maybe Paul, or Dale,
3 want to summarize the comments that you provided
4 on the BRAC cleanup committee?

5 MR. HEHN: Actually I can just
6 briefly summarize that. It was essentially just
7 a discussion that we held with Jim in attendance
8 to kind of supply him with comments directly,
9 and some of the questions that came up about
10 that. So I don't have any notes with me so I
11 can't give you any specifics on that, but rather
12 than submitting written comments, I think there
13 were a couple of cases where written comments
14 were submitted, but essentially, just a verbal
15 discussion. We got Jim to make some changes on
16 things that needed to be done on the BRAC
17 Cleanup Plan.

18 CO-CHAIR NELSON: Are there any
19 major comments?

20 CO-CHAIR SULLIVAN: I think they

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1 were more corrective, and Dale submitted a good
2 list of comments.

3 MS. SMITH: I made a bunch of nitty
4 picky things, but I don't remember anything
5 super major from any of this.

6 MR. HEHN: There was some question
7 about the offshore sample, some questions about
8 the old fuel docks, how the bridge investigation
9 and cleanup was depending on that.

10 MS. SMITH: The only other thing, he
11 did make a presentation on reading that some of
12 us had with Cal EPA and that infamous letter
13 that I wrote, and it was a very positive meeting
14 and Treasure Island was recognized as a very
15 positive supportive facility to work with as
16 opposed to some of the others.

17 CO-CHAIR NELSON: Again, good
18 feedback. Next item I'd like to take up is the
19 meeting on April 9, and if there is some
20 discussion of the options you would like for.

1 that workshop, and maybe Sophia --

2 DR. SERDA: I'd just like to say, I
3 can be very flexible with the date or the timing
4 of the presentation on risk assessment. So if
5 you would wish to move it, you can, that's very
6 flexible, but I would like to have the workshop
7 be at least two hours, and I don't know how long
8 your meetings are, and I think it will detract
9 from the presentation if we separate it, you
10 know, an hour for something else, as well as
11 distracting with your other business, that's my
12 thought.

13 CO-CHAIR NELSON: Other thoughts?

14 MS. SMITH: I think it's an
15 important issue, so if she feels two hours is
16 what we need, I think that's important. We do
17 need to discuss budget issues, but I would
18 really not want to slight the workshop.

19 MR. HEHN: As part of the document
20 review, the best sale remediation, I have viewed

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that, and there's not a lot of reading so it's not something that is really going to require a lot of comment on that, so if people want -- if anybody would like to submit comments to me, we can put them in there and have a discussion in an interim meeting unless there's some particular point that we need to bring up, that's fine.

DR. SERDA: The only other thing I want to bring up is that the Treasure Island risk assessment is going to be submitted in August, so our discussions about risk assessment can begin now. I feel we have ample time to discuss, you know, risk assessment.

CO-CHAIR NELSON: Is there any more discussion? I guess what I'm hearing is that we'll go for April 9th for a human health risk assessment exclusive.

DR. SERDA: Is that going to satisfy the Navy?

1 CO-CHAIR SULLIVAN: We wouldn't even
2 have the budget in our hands until probably at
3 least the 10th of April, so the 9th of April
4 wouldn't do us any good, so the only other
5 consideration would be to -- would be if there
6 was going to be another interim meeting, like
7 that would be on the 16th, you know, to consider
8 the budget. So whether or not you wanted to
9 have -- whether the community members wanted to
10 have both the workshop on the 9th and also
11 consider having another interim meeting on the
12 15th, or on the 16th, may be too many meetings,
13 or unless it's really felt that we need a
14 pre-meeting to discuss the budget before the
15 regular April meeting, but I think it sounds
16 like there will probably be an opportunity to
17 have an interim meeting after the April regular
18 meeting.

19 MS. VEDAGIRI: I am a new RAB member
20 so my question you might be unable to answer it.

20 1 I don't have a human assessment work plan. I
2 have been attending the RAB meeting since last
3 July, but the risk assessment is already on
4 their way; is that right, it was there, a work
5 plan submitted before, and now they're actually
6 doing the risk assessment?

1 7 CO-CHAIR NELSON: I guess I can't
8 establish that, but I don't know that there was
9 intended to be a human health risk assessment
10 work plan. And --

11 MS. SIMONS: This is what I
12 understand, so correct me if I am wrong, is that
13 there was a human health assessment done with
14 the phase one data so we went to the phase two,
15 and essentially they used the comments that we
16 had on phase one and there were some discussion
17 of specific issues, but the basic input was from
18 the phase one, so I think if there was a work
19 plan from the phase one it was there, what
20 they're generally using, with some

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modifications.

DR. SERDA: Yes, that's correct.

MS. SIMONS: But it does exist, the draft work, this was probably a year before I was even -- three years ago, something like that.

CO-CHAIR NELSON: Among the RAB, you can get a copy of that phase one.

DR. SERDA: I have looked at the baseline work plan to PTI and it's really just a basic outline because it doesn't contain that much site-specific information. I know the real information on Treasure Island's data will come -- I guess you could look at phase one information but that wouldn't give you the risk assessment, how it will look and what will it address. I think August will see the final documents, so --

CO-CHAIR NELSON: So do you think you might be able to grab that health phase one

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health risk assessment outline for the workshop?

DR. SERDA: We could do that, or I should talk to -- we can do that.

MR. ANDERSON: I guess there's an outline, there's also basically an approach document outlining in little more specifics that we could provide.

MS. VEDAGIRI: My thought is that at least for the other newer RAB members, along with learning what's a human health risk assessment, I think all of us are really seeing how it's going to be applied to Treasure Island.

DR. SERDA: Clearly one of our objectives in this workshop is to present as much site-specific information on Treasure Island as possible. Of course, I think we all have to realize that the risk assessment for TI is not going to be submitted till August, so we are limited about what we can present, and so that's the challenge in the workshop, that's my

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challenge.

CO-CHAIR NELSON: Richard?

MR. HANSEN: For this workshop, I think for most of us, I think part of coming to these meetings is getting there. Especially with this problem with Yerba Buena and all of that, and some of these smaller meetings that were held in Brad's office and Dan's office are really more congenial tutorials than this big auditorium, and if Brad or Dan could let us have that April meeting in the city, I think you would have a lot probably more successful meeting.

CO-CHAIR SULLIVAN: We run into the issue, though, is there's East Bay people too, and actually with the number of, I think, the number of people we're going to have, putting the workshop together and supporting regulators, we wouldn't -- maybe we can have a little more congenial table arrangement than this, but we'll

1 probably still need a good-size conference room
2 in order to be able to have that. And then I
3 think that we're really left with Treasure
4 Island as kind of a neutral territory in the bay
5 between the East Bay and the city.

6 MR. ONGERTH: I would accept that
7 opinion.

8 MR. HANSEN: I withdraw the
9 suggestion.

10 CO-CHAIR NELSON: But I guess
11 flexible -- I think, Richard, you can get to San
12 Francisco on public transit, whereas it might be
13 difficult to get to the island.

14 MR. HANSEN: It's hard to get here
15 right now.

16 MR. MCDONALD: My office is 200
17 yards from Embarcadero BART station.

18 MR. WONG: On top of it. There are
19 some mitigating reasons why East Bay people can
20 get to downtown San Francisco.

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MS. SMITH: I have a problem getting there, but if the military felt comfortable having it here, I don't want to --

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CO-CHAIR SULLIVAN: Maybe what I could suggest is that maybe have it on TI for this particular workshop, but if we want to explore some interim meetings, some alternative transportation on locations for other workshops, then we could certainly do that. But I would propose that we stick with TI for this particular workshop, maybe some other alternatives downstream in other events.

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MR. HANSEN: So this is going to be the 9th of April, 7 o'clock?

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CO-CHAIR SULLIVAN: Yes.

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CO-CHAIR NELSON: In Building 1.

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CO-CHAIR SULLIVAN: No, here.

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MR. ONGERTH: That's different from what this agenda said.

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CO-CHAIR NELSON: I was in error, I

1 was thinking regular interim meeting and I
2 automatically wrote Treasure Island Building 1,
3 and I need to send out a correction that
4 specifically states that for the workshop it
5 will be here in this room, my error.

6 DR. SERDA: I just want to clarify,
7 you said the workshop will be on April 9 from 7
8 to 9?

9 CO-CHAIR SULLIVAN: Yes, and what
10 I'd like to suggest in terms of budget is
11 perhaps so we don't get meetinged out, that I
12 would like to propose you have a regular meeting
13 in April in which the budget will be a
14 significant part of the meeting, and then may
15 need to be a follow-on meeting a week or two
16 later to fine tune.

17 MR. HANSEN: Can you send us a piece
18 of paper with the salient features?

19 CO-CHAIR SULLIVAN: You'll have the
20 budget in your hands hopefully at least around

1 one to two weeks before the regular April
2 meeting.

3 MR. ONGERTH: There seems to be some
4 problem with the mail, I'm not sure just where
5 that problem lies, but certainly some things
6 come awfully close to the date of the meeting.

7 CO-CHAIR SULLIVAN: Yes, I think we
8 need to back up our mailing dates for some
9 items. I agree with you.

10 CO-CHAIR NELSON: I guess to
11 complete the organizational business I would
12 like to ask Paul if you're going to coordinate
13 the comments on the bioremediation report, when
14 would you like that, from those that are
15 interested?

16 MR. HEHN: I think if I can get
17 those by the time of that April 9th meeting.

18 CO-CHAIR NELSON: Shall we just say
19 April 9, either by fax or in person?

20 MR. HEHN: That will be fine.

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CO-CHAIR NELSON: I think that's the end except for the one item. There has been some interest expressed in the past of the RAB members being a party to the BCT meetings, and I was wondering if that was still an active issue and if the agency would be willing to consider that?

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MS. SHIRLEY: I think it's an active issue. At least it is for me.

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CO-CHAIR SULLIVAN: We're certain -- we are certainly willing to address it, so if the RAB membership would like to have a representative, and if someone is able to attend their meetings, we would certainly consider it, and this has been occurring in other RABs.

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CO-CHAIR NELSON: Are there any volunteers? Any interest?

MS. SHIRLEY: I can go, if someone else is interested, that will be during the day.

CO-CHAIR NELSON: Would someone like

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to make that a motion or are there other
volunteers?

MR. WONG: I make it a motion.

Chris, you are our representative.

MR. HEHN: Second.

CO-CHAIR SULLIVAN: The next meeting
is the 15th, Christine. We'll send you an
agenda.

MS. KATHURIA: 15th at PRC.

CO-CHAIR SULLIVAN: Okay. Upcoming
reports, we've already talked about the
bioremediation treatability study, that's the
only thing that's got a firm date on it. We do
have a fossil underway now for the lease of
Building 3, and actually that should have stated
Building 40, Building 3 and Building 40 for
expansion of the film studios. They're
currently in Building 180 and Building 2, and
that will be expanding into Building 3.
Building 40 is a smaller adjacent building and

2 1 that will be available sometime in the May time
2 frame, maybe June.

3 Now we're actually -- Today we are
4 doing air testing in the Building 3 area, and
5 with the results of that air testing, we're, the
6 Navy, with the concurrence of Cal EPA, is
7 allowing Disney Company to move into Building 3
8 in the next week or so under a license which is
9 a short-term lease pending the completion of and
10 binding of the final fossil.

11 We also have a fossil that will be
12 underway in another week or so for the lease of
13 Navy brig, and then we expect that we'll be
14 doing a fossil in the fireplace school but we
15 don't have the firm schedule for that yet.

16 MS. SMITH: Jim, I recall reading
17 something from one of the -- I don't remember
18 who, if it was Rohen and --

19 CO-CHAIR SULLIVAN: Treadwell and
20 Rollo is the geotechnical consultant.

1 MS. SMITH: But they said that
2 Building 3 was damaged in the Loma Prieta
3 earthquake. Is that true or is that just
4 something that --

5 CO-CHAIR SULLIVAN: Building 3, of
6 course it doesn't affect our environmental work
7 at all, Building 3, like other buildings, was
8 damaged and the damage hasn't been repaired, but
9 it doesn't affect the safety of the building for
10 leasing purposes.

11 MS. WALTERS: That's not entirely
12 true. The city has hired a consultant to do a
13 structural analysis of certain buildings as
14 they're doing a phase approach on buildings on
15 TI, and Building Number 3 is one of the first
16 things that they're going to be looking at in
17 terms of life safety issues.

18 CO-CHAIR SULLIVAN: I'm more
19 long-term basis for the purpose of our doing a
20 fossil and someone moving in.

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MS. WALTERS: I'm just letting her know that the city is looking at it more specifically.

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CO-CHAIR SULLIVAN: Actually, I agree.

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MS. GLASS: And before there was kind of a survey building, sort of some general sort of structure, but this is a specific look at certain buildings as they are in the location that they are, so it's kind of a relation of structural geotechnical information, so --

CO-CHAIR SULLIVAN: But we may be doing findings of suitability to lease as well as transfer, and it might be independent of other non-environment investigations going on.

We're now in the open questions and discussions, but given that the ongoing discussions we've had on various items, we'll move through that.

MS. SHIRLEY: I just have a quick

1 question. Does anyone want an update about the
2 lawsuit? I can give a two-sentence update. The
3 Baykeeper lawsuit.

4 A couple weeks ago there was this
5 big press thing where we actually went ahead and
6 filed -- not filed, but lodged the suit, which
7 means that it's not officially filed but it's in
8 the settlement. So we've had a couple of
9 settlement meetings and there's nothing, no
10 outcome yet, but the discussions are positive.

11 MS. VEDAGIRI: Who is we?

12 MS. SHIRLEY: (Inaudible) and the
13 Navy. There are two parts to it. One is it's
14 not really -- well, I guess you could call it,
15 it's runoff that gets leaks in the storm water
16 system and then gets out, then the sewage
17 treatment plan has some operator problems that
18 they're working through, but our intent is to
19 settle this without following through. So, but
20 things are moving along.

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1 MR. ONGERTH: What was the point of
2 the suit initially?

3 MS. SHIRLEY: It was to push the
4 cleanup of petroleum, push it forward in the
5 light of the fact that there was no funding.
6 It's just a little incentive to get things
7 rolling.

8 MR. ONGERTH: It was a tactical
9 suit.

10 MS. SHIRLEY: Yeah, I suppose you
11 could call it that, yeah.

12 MR. HANSEN: You're suing for money.
13 Where is the money going to go?

14 MS. SHIRLEY: Well, it's all
15 proposal. If penalties are -- if any money is
16 awarded it will go to a community foundation in
17 the Bay Area, Oakland, San Francisco area, for
18 the TI-related issues. So I don't know any more
19 than that.

20 MR. ONGERTH: Does Baywatch have

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1 some foundation in mind?

2 MS. SHIRLEY: Baykeeper. There are
3 three or four foundations that we have used in
4 the past for this. So yes, but like I say,
5 nothing has been decided.

6 CO-CHAIR SULLIVAN: Really, at this
7 point we're in the technical discussion,
8 exchange of technical information.

9 MS. SHIRLEY: I think the
10 discussions have been positive overall. That's
11 where it is.

12 CO-CHAIR NELSON: I think I have
13 gone through my last remediation notes, proposed
14 agenda items, the next meeting, and I don't
15 think that we need to go through those in any
16 detail but I would like people to look at the
17 second bullet and maybe come to the next meeting
18 with an idea one way or another, as to what to
19 do with the issues, and if there are other items
20 that you like to be considered for next meeting,

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please bring your proposals.

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CO-CHAIR SULLIVAN: I think I'd like to propose a joint action item between the Navy, the regulators and the community members to make -- to work out a more longer range meeting schedule, then see if we can put together a schedule to take us, well, maybe all the way to December. Maybe we can work jointly on that, at least in terms of the major topics, and we've already done some work on identifying major education topics, and we can add in the major cleanup topics and come up with a shell schedule for the rest of the year, always subject to some flexibility.

CO-CHAIR NELSON: I guess I'd like to propose people to have their ideas ready for the April meeting so we can create together such a list. I'm just putting that out as a thought. I'm seeing heads nod.

CO-CHAIR SULLIVAN: We can maybe

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1 gather ideas and then maybe in the interim
2 meeting in the next two months or so work out
3 more in details, more of the details. With
4 that, I think we can close the meeting.

5 Thank you for your patience for the
6 extra 26 or 27 minutes, and have a safe drive
7 home, and once again, don't forget the workshop
8 on the 9th of April right here at the Nimitz
9 Center at 7 p.m. Thank you.

10 (Whereupon the meeting concluded at 9:55 p.m.)

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CERTIFICATE OF DEPOSITION OFFICER

I, SANDRA S. MOVAHED, duly authorized to administer oaths pursuant to Section 2093(b) of the California Code of Civil Procedure, do hereby certify that the witness in the foregoing deposition was by me duly sworn to testify the truth in the within-entitled cause; that said deposition was taken at the time and place therein stated; that the testimony of said witness was reported by me and was thereafter under my direction electronically transcribed; that the foregoing is a full, complete, and true record of said testimony; and that the witness was given an opportunity to read and correct said deposition and to subscribe the same. Should the signature of the witness not be affixed to the deposition, the witness shall not have availed himself of the opportunity to sign or the signature has been waived.

I further certify that I am not of counsel or attorney for either side or any of the parties in the foregoing deposition and caption named, or in any way interested in the outcome of the cause named in said caption.

DATED: APR 09 1996

Sandra S. Movahed

CSR #5623

CERTIFICATE OF REPORTER

I, the undersigned, a duly authorized Certified Shorthand Reporter, do hereby certify that the within proceedings were taken down by me in stenotype and thereafter transcribed into typewriting under my direction and supervision, and that this transcript is a true record of the said proceedings.

Sandra J. Novak

CSR #5623