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REMEDIAL PROJECT MANAGERS' MEETING

NASA/JET PROPULSION LABORATORY

ROOM 801

18 JANUARY 1996

ATTENDEES:

Jon Bishop, RWQCB-LA

Charles L. Buri, JPL

Mark Cutler, Foster Wheeler

Debbie Lowe, US EPA

Dan Melchior, Foster Wheeler

Penny Nakashima, DTSC

Stephen Niou, URS

Judith A. Novelly, JPL

B.G. Randolph, Foster Wheeler

Vince Richards, Foster Wheeler

Peter Robles, Jr., NASA

Mariam S. Wolfenbarger, JPL



L. R. Linn & Associates
Suite M-10
345 South Figueroa Street
Los Angeles, CA. 90071
(213) 628-7874

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Reported by; Louise K. Mizota, CSR 2818

1 Pasadena, California

2 January 18, 1996

3 9:43 A.M.

4
5 BURIL: I think we've got everybody here. I
6 want to take a minute to introduce an observer with
7 us today. This is Mariam Wolfenbarger. She's in
8 our Facilities Division. Mariam is going to be
9 working with the construction and design aspects as
10 we start getting into potential remediation. She's
11 never seen one of these, and she asked whether she
12 could sit in and just see what happens, and I said
13 sure, why not. So she's here to observe.

14 We have our agenda here in front of us.
15 And we have a number of folks here. We'll go around
16 and introduce everybody so that the reporter knows
17 who you are and we can do a voice recognition on the
18 tape.

19 Judy, why don't we start with you.

20 NOVELLY: I'm Judy Novelly from JPL.

21 NIOU: Stephen Niou, URS.

22 LOWE: Debbie Lowe, U.S. EPA.

23 NAKASHIMA: Penny Nakashima, DTSC.

24 BISHOP: Jon Bishop, Regional Water Quality
25 Control Board.

1 RICHARDS: Vince Richards, Foster Wheeler
2 Environmental.

3 RANDOLPH: B.G. Randolph, Foster Wheeler
4 Environmental.

5 CUTLER: Mark Cutler, Foster Wheeler
6 Environmental.

7 MELCHIOR: Dan Melchior, Foster Wheeler
8 Environmental.

9 ROBLES: Peter Robles, NASA.

10 BURIL: Chuck Bupil with JPL.

11 What I'd like to do, then, is to take a
12 look at the agenda. I'm hopeful that you all
13 received a copy of our letter to you and have had a
14 chance to go through that. We've bulletized this in
15 an attempt to just try to identify the things we'd
16 like to talk to.

17 What I'd like to do, though, is to take
18 that response letter, since it kind of follows what
19 was initially sent, and touch on each one of the
20 issues that are identified there and kind of get a
21 feedback from the agencies as far as what your
22 thoughts are regarding the response in terms of your
23 concerns, your agreements, whatever, that you may
24 have, and anything that comes on the table that we
25 could hopefully discuss and see how we can come to

1 consensus on a variety of things that are in this
2 thing.

3 LOWE: I have a question about the agenda.

4 BURIL: Sure.

5 LOWE: What's the difference between 1 and 3 and
6 why are the two items separated by discussion on
7 risk assessment?

8 BURIL: There probably isn't a real difference
9 per se. I imagine we'll probably cover number 3 as
10 we go through number 1, depending upon how we deal
11 with it. This was just something that we are very
12 hopeful to be able to come to resolution on all
13 these things so we can move forward. If it occurs
14 during number 1, that's great.

15 Under item number 1 on the NASA response,
16 I don't think there's any contention there. I think
17 that's pretty much a "gimme" and I don't think we
18 need to discuss that. I assume everyone agrees with
19 that approach.

20 BISHOP: Yes.

21 BURIL: Under number 2. Hopefully you've had an
22 opportunity to look at the water chemistry diagrams
23 and have had a chance to realize where we are in
24 terms of our position. We're curious to hear from
25 you folks what your thoughts are, and so on. So I

1 just throw it open to you folks and go from there.

2 NAKASHIMA: What number are you on?

3 BURIL: I'm on item 2, page 1 of the response
4 letter from NASA. Anyone want to start?

5 MELCHIOR: Do you have a copy of it?

6 NAKASHIMA: Let me start, then, because I don't
7 know if anyone else has any concerns about this.

8 I went through and I looked at the stiff
9 diagrams that you passed out at the last meeting for
10 the other wells as well as the ones that you
11 provided in this memo.

12 And I had noticed that what you're saying
13 about the water chemistries as related to the
14 contamination, if that were true, then I would
15 expect to find that the other wells that were in the
16 same areas would have the same water chemistry.

17 BURIL: Which wells are you thinking of?

18 NAKASHIMA: For example, MW-1 and MW-9 and the
19 wells on the eastern side should have the same water
20 chemistry.

21 BURIL: As?

22 NAKASHIMA: Because they're the same water
23 source? No?

24 CUTLER: No, it's not. It's not, though.

25 NAKASHIMA: Is that not true?

1 MELCHIOR: No. If you look at MW-1, it is right
2 at the mouth of that sub canyon. It's very unlikely
3 it receives any water from the remainder of the
4 basin. It's probably just underflow from under the
5 alluvial material within the canyon.

6 NAKASHIMA: So the source of the water for MW-9
7 is different from MW-1? Is that what you're saying,
8 even though your diagram shows that the groundwater
9 flow direction is coming down this way?

10 CUTLER: Right. Which map is that?

11 NAKASHIMA: Well, this is just -- it could be
12 any map. Any of them. They're all showing -- so
13 I'm just wondering.

14 CUTLER: There's two different sources. Look at
15 the first map you had. Look at Well 10.

16 NAKASHIMA: No. I'm talking about 9.

17 BURIL: She's talking about Well 9.

18 CUTLER: Right. She's saying are they the same
19 source as at Well 10.

20 BURIL: No, no.

21 NAKASHIMA: No, no. 1 and 9, are they the same
22 source?

23 CUTLER: Yes.

24 NAKASHIMA: I was going to say, oh, there's
25 another source of water I'm trying to find.

1 CUTLER: No.

2 NAKASHIMA: I looked at these draft Stiff
3 diagrams and they're dated November-December '94 and
4 June-July '94. The November-December one, I have
5 here Well 15, 14, 10, 9 and 6 having similar water
6 chemistries. And I thought if -- and then on the
7 other map June-July --

8 BURIL: You're saying 6, 9, 10, 13 and 15 the
9 shapes are similar enough that they look to be a
10 similar source of water?

11 NAKASHIMA: If you're trying to show or support
12 that the contamination is related to the different
13 water chemistries, then it should hold true across
14 the whole site. But since there's a well over here
15 besides MW-9 that has a water chemistry that looks
16 different from MW-1, then how would you explain
17 that?

18 And then also, for the other site, MW-6,
19 you're getting a water source from off site. Why
20 would the water chemistry look different for MW-5
21 and MW-10? If you can explain that.

22 CUTLER: The main thing about this overall
23 picture is not just the water chemistries. It's
24 also flow directions.

25 I think the place to start is probably

1 flow directions. When we see higher concentrations
2 of TCE in Well 10, flow is typically from the west,
3 basically off site. When TCE concentrations go
4 down, flow is basically from the east from the site.
5 Okay. Then you look at the water chemistries.

6 NIOU: I had a question for this argument. The
7 reason is, if you look at Figure 6 through 8, you
8 will find out in 6 water is flowing to the west. On
9 7 and 8, even though W-2 has a higher water level
10 than W-10, at the same time W-5 is also having a
11 higher water level than 10. So we don't know which
12 way water is really going at W-10.

13 Not only that, also with the gradient, if
14 you calculate out between MW-2 and MW-10, MW-2,
15 given it's the same location as MW-14, right?
16 Therefore, you calculate out the gradient, it's only
17 .002 or .0017. Assuming a permeability of one
18 darcy, I think that's normal. And the permeability
19 of .3 takes over 200 years for anything to move from
20 MW-14 to MW-10.

21 Therefore, if you use the flow, somehow I
22 feel it takes too long to get there to support your
23 argument of --

24 CUTLER: No.

25 MELCHIOR: No. I think in a static condition

1 you're --

2 CUTLER: The conceptual model, plus, to back up,
3 if we felt that we could absolutely prove this, we
4 wouldn't be proposing Well 23 in the first place.

5 NIOU: Well, my position is I do not have a
6 strong position either way. I just use your point
7 to --

8 ROBLES: Why don't you go up to the map.

9 NIOU: Use your point to say for scientific way.
10 If you say it is flowing from there --

11 CUTLER: No, it's not.

12 NIOU: -- then takes too long to really get from
13 14 to 10.

14 CUTLER: Okay. TCE, primarily the highest
15 concentration is in Well 13 on the site.

16 NIOU: Yes.

17 CUTLER: When it flows in this direction it's in
18 Well 2, screen 2 here and here and here. So it
19 appears to be sinking.

20 When it gets down to here, this is a
21 shallow well. So we first looked at this as a
22 disconnect. If this was the source, TCE is sinking,
23 sinking, sinking, but here it didn't sink. So
24 something doesn't fit right.

25 Then we look at flow directions. You're

1 right. You could interpret it as very flat and you
2 can move things back and forth. That's why we're
3 not absolutely certain it's reversed. There is a
4 reversal over here and whether it goes through Well
5 10 or not -- but there is a correlation there,
6 depending on how you draw that line.

7 Then you look at the water chemistries.
8 We're not saying that contaminants in one quarter or
9 between events came from here and flowed to Well 10.
10 What it appears is there's a plume, this is a
11 preconceived idea, in Well 10 that the data can
12 suggest is not related to this plume, and depending
13 on flow directions, if we're right on the edge of
14 this plume, if flow is this direction, maybe Well 10
15 is not picking up higher concentrations. When flow
16 is this direction, maybe we're picking up a little
17 bit higher concentrations.

18 We're not saying that it flows all from
19 here to here one quarter and then it flows all the
20 way back.

21 BURIL: If you take like a piece of paper or
22 something and having the edge of the paper be the
23 edge of the plume and having that moving back and
24 forth and that water chemistry fingerprint flows
25 with that plume, that's what we're looking at. You

1 have at certain times that chemistry and that
2 associated plume, at least what appears to be
3 associated, is in Well 10. And that's when we see
4 what appears to be the up-gradient type chemistry
5 and we see contamination go up.

6 When we see something to the reverse, it
7 appears possibly the plume is pushed away from that
8 area and the water chemistry changes and the
9 concentrations go down.

10 CUTLER: Right. The upper screen in Well 4, and
11 typically this is a shallow well, Well 5, doesn't
12 show the same concentrations as Well 10. So if
13 you're trying to draw a plume on here, you need to
14 draw some type of an edge of a plume right in here.
15 And because of this disconnect here between this
16 plume and possibly this, you can reasonably draw it
17 right through there. So you're near the edge of
18 something.

19 We're probably getting a little off focus,
20 too. One of the main reasons for putting a well in
21 here is for characterization, for us to know if we
22 have to design a remedial system to handle this TCE.
23 Do we have to handle the TCE plume that extends to
24 here, or extends to here? The primary purpose of
25 putting this in was the same reason for Well 22,

1 just to find the limits of this real hot zone. As
2 we looked further into the data, we see water level
3 changes, our flow direction changes. We see water
4 chemistry changes, and it's related to TCE levels.

5 So it could be correlatable. And this
6 will help us determine that.

7 MELCHIOR: That's really what we're looking at.
8 We're trying to determine the extent, as Mark says,
9 and to see if there is a connection both chemically
10 and contaminant-wise between the contaminants in 10
11 and the rest of the site.

12 NAKASHIMA: In Monitoring Well 10 and 4 your
13 contaminants are in screen 2.

14 BURIL: In Well 4. Well 10 there only is one.

15 NAKASHIMA: Wells 4 and 10, right?

16 BURIL: No. There is no --

17 NAKASHIMA: 10 there's only one.

18 BURIL: Right.

19 NIOU: No what?

20 BURIL: There is no second screen in Well 10.

21 NAKASHIMA: And then 5 is shallower. It's like
22 85 feet or something. And that could be the reason
23 why you're not picking up any of the TCE in that
24 Monitoring Well 5, because it's shallow in
25 comparison to the other two.

1 BURIL: That's possible.

2 CUTLER: Right. That's another reason for
3 maybe --

4 NIOU: A deep well at --

5 BURIL: 23, to try to understand what's going
6 on.

7 CUTLER: This deep well, this is going to have
8 three screens in it. If we pick up TCE, shallow
9 here, shallow here, shallow here, okay, maybe there
10 is some connection.

11 But if it's shallow here, deep here, deep
12 here and deep here, there's no real connection
13 between this TCE and this TCE. We don't know.

14 MELCHIOR: Why it's important in the end is if
15 we get down into a feasibility study and we start to
16 look at alternatives and let's say removal or
17 extraction of water is an alternative, we need to
18 know the depths that we need to have extraction
19 systems installed. Right now that's one of the real
20 justifications in addition to all of the others that
21 Mark has mentioned for 23, is an extraction well 250
22 feet below the surface, or is it 150 feet below the
23 surface?

24 CUTLER: So there's a lot of other reasons.
25 It's just interesting that these things correlate,

1 water chemistries, TCE levels, flow directions.
2 It's very flat. You can make a case it's flowing
3 the other direction. But it's --

4 BURIL: We don't know. That's what we'd like to
5 be able to try to understand.

6 NIOU: I agree. That's why I say I don't have
7 an opinion.

8 ROBLES: We want to know if it's our plume or is
9 it somebody else's plume.

10 That's what our main concern is.

11 MELCHIOR: And the vertical extent of what's on
12 site, I guess we're looking for concurrence on that
13 concept.

14 CUTLER: The other interesting thing,
15 preliminary data seems to say that TCE levels in
16 this well are related to water chemistry. The TCE
17 levels in the second screen here, water chemistry
18 doesn't change, things don't seem to be affected.
19 So there is some correlation here between these.

20 NIOU: Also, there's another point. I notice
21 that at MW-1 and MW-7 the Stiff diagrams doesn't
22 change much.

23 BURIL: That's correct.

24 NIOU: But MW-10 changes. I don't know what's
25 your theory for that change.

1 BURIL: Again, it's the same kind of situation
2 where we may have a different water chemistry, a
3 different source of water, a different chemistry
4 plume, if you will, moving back in and out as a
5 result of other functions going on in the Arroyo and
6 pumping, and so on. All the variety of things that
7 occur, both upstream and downstream, that at some
8 point in time the water that comes in from the
9 Arroyo, which is essentially the water chemistry at
10 MW-1, is more of an influence in the area of 10
11 based on the conditions that surround the area, and
12 at other times it appears that it's the chemistry
13 that is related to someplace else. We assume, based
14 on regional gradient, that it's coming from
15 upgradient, from the west, and coming into that
16 area.

17 So you're getting a confluence of things
18 happening here, and it's a very hydrologically
19 dynamic spot here at the Laboratory simply because
20 of the tremendous amount of water that's being
21 naturally spread, and also with the spreading basins
22 there.

23 MELCHIOR: And the extraction.

24 BURIL: And the extraction as well. Right.

25 NIOU: My interpretation of this -- I'm not a

1 geochemist, but my interpretation of this is
2 normally once salt or minerals get in there, it's
3 hard to move them out unless temporary you have,
4 like you said, there's a different source coming in,
5 diluted temporary, but it will come back, because of
6 the local geochemistry it will turn back.
7 So maybe from rain water or from the Arroyo coming
8 down, may be temporary.

9 MELCHIOR: One of the things that we notice,
10 Stephen, is that when they start the wells up, the
11 production wells along the Arroyo, we see tremendous
12 head drops across our site in the groundwater
13 elevations.

14 So what you're saying is true in many
15 respects, that the local chemistry will influence,
16 it will be equilibrium, if you will, but
17 unfortunately we see such a dynamic change due to
18 pumping effects or we see water moving at a
19 tremendous rate towards those wells. And when there
20 are heavy precipitation events, when the spreading
21 occurs, we see heavy mounding, very rapid mounding
22 of the water table.

23 So it's an extremely dynamic system and
24 the chemistry cannot keep up, the local chemistry,
25 in reaching equilibrium, cannot keep up with the

1 dynamics of the flow. So it's really not at
2 equilibrium at those times.

3 CUTLER: On some of those big rain events when
4 the spreading grounds are full a lot of runoff out
5 of the Arroyo, you get a complete flow reversal
6 across the site. This water is flowing that
7 direction clear across the site. And maybe
8 temporarily it is diluting the water of these wells
9 out of the edge. Water chemistries change during
10 the summer months or less rain, things go back to
11 normal. I think that's what's happening.

12 And the chemistries are following the TCE
13 levels, which makes us think --

14 ROBLES: The bottom line is you can choose any
15 scenario you want to. You can argue any way you
16 want to. Until we know what's going on down there,
17 nobody can make a correct assumption. We can't make
18 a correct assumption ourselves. And we're not ready
19 to put an incorrect assumption in a feasibility
20 study if we don't understand the hydrodynamics in
21 that area.

22 MELCHIOR: I guess that's why we're looking for
23 concurrence on installation of MW-23.

24 NAKASHIMA: I'm just concerned that the
25 rationale for your opinion is MW-23, whether or

1 not -- I'm not real convinced that with the water
2 chemistry that you present in your tables, because
3 you presented us with, I think, the water
4 chemistries for four of the wells, but not for all
5 of the wells in this area. We didn't get for number
6 6, number 5 and some of the other wells in the area
7 in your memo.

8 And I'm just concerned. Have you looked
9 at this and have you determined that this is really
10 necessary? Because if you go in and put this in and
11 then the public starts screaming about the taxpayer
12 dollars, "You put this well in." And so I really
13 need to be convinced thoroughly that --

14 BURIL: Sure. I can understand that, Penny.

15 NAKASHIMA: I need rationale. So if you can
16 explain these things about if you're going to use
17 the water chemistry to support this installation of
18 the well, I wish that you would explain to me about
19 the differences in the water chemistry of MW-6 from
20 10 and 14 and the difference from 1 and 15, and then
21 also the explanation of the depth of the
22 contaminants, how you're saying you need to find out
23 if it's deeper. You're saying there's no
24 contaminants or it's nondetect in MW-5, but that's a
25 very shallow well in comparison to 10.

1 CUTLER: They're both the same. They're both
2 shallow wells.

3 NAKASHIMA: No, but the depths are different.
4 The screens.

5 BURIL: The depths may be different, but I think
6 it's due to topography as opposed to anything else.

7 MELCHIOR: Right.

8 RANDOLPH: That's correct.

9 NAKASHIMA: They're 50-foot screens, also?

10 BURIL: Right. Remember, 10 is kind of up on
11 the hill there, and 5 is down in the parking lot.
12 There's about a --

13 MELCHIOR: 70-, 80-foot --

14 BURIL: I don't know if it's that far, but it's
15 a pretty good topography difference there, probably
16 measured in tens of feet.

17 CUTLER: If you look at elevations, I think the
18 elevations are within 10 feet of each other and
19 that's due to water levels when the wells were
20 drilled. They were drilled, I don't know, a year or
21 two apart, at least. And 10 feet is pretty close,
22 but 50 feet --

23 MELCHIOR: Can't get much closer.

24 BURIL: The scale on the side there, Mark, is
25 that elevation of --

1 NAKASHIMA: That's elevation.

2 CUTLER: But the main point to you, Penny, is
3 not so much water chemistry. That kind of gives us
4 a hint something is going. We want to find out
5 where this contaminant plume is. We're not doing it
6 for soil chemistry or groundwater chemistry. We
7 wanted to find the limits of that hot spot.

8 NAKASHIMA: Have you identified any sources
9 south of JPL, south of 10 and 5, as possible sources
10 that may support -- (assumptions)

11 CUTLER: We do know that up Foothill Boulevard,
12 the Valley Water Company production wells have
13 detected solvents.

14 BURIL: Albeit not in the same concentrations as
15 we see on site and not in the same concentrations
16 that we've seen in other wells off site. They tend
17 to fluctuate back and forth. The ones they see up
18 there, they see TCE, but they see it in different
19 concentrations than what we see here. They also see
20 perchloroethylene that we hardly see at all here.

21 MELCHIOR: That may be a timing effect, though.

22 BURIL: That may be a phasing effect for any
23 number of things.

24 MELCHIOR: When solvents were used or disposed
25 of.

1 BURIL: Exactly. So we really don't know
2 another source, but we have reason to believe it's
3 possible. What we want to be able to establish is
4 two things: One, we want to know if this is
5 something JPL has created as a potential problem, we
6 want to know if that is something we have to deal
7 with.

8 And secondly, if it is connected, then
9 fine. But secondly, if it's not connected, it has a
10 fairly dramatic impact on what our feasibility study
11 will identify as the size of a required pump and
12 treat system, if that's an alternative that we go
13 to.

14 BISHOP: Let me see if I can kind of in my own
15 head go through. Do you mind if I borrow this?

16 NAKASHIMA: Go ahead.

17 BISHOP: So 13 shows shallow TCE. Is that
18 correct? MW-13?

19 BURIL: Yes.

20 CUTLER: Yes.

21 BISHOP: And MW-4 shows it at a deeper level?

22 CUTLER: The maps were handed out I think two
23 RPM meetings ago.

24 BISHOP: I didn't bring everything. I brought
25 only selected things, and of course it wasn't the

1 one I needed right at this moment, to make sense out
2 of it.

3 CUTLER: I've got a map that I think can show
4 you what you're talking about in just a minute here.
5 This is the same stuff that we handed out before.

6 ROBLES: Go ahead.

7 BURIL: Why don't you give copies to each of
8 them, Mark.

9 CUTLER: This is all I have.

10 BISHOP: These are the originals. I won't mark
11 on it.

12 BURIL: Are these different maps?

13 CUTLER: These are for carbon tet and for DCA.
14 That's for TCE. So you can see the results. It's
15 down on the second screen in Well 4.

16 BISHOP: So what I'm thinking in my head, so
17 you're putting MW-23 in between 14 and 10. And the
18 rationale is if this material shows up equivalent to
19 MW-4, we're on a track that that plume is distinctly
20 different from MW-10. If it shows up more related
21 to MW-10, then you're on the track of saying that
22 the contaminants in MW-10 are related to the ones at
23 13.

24 BURIL: Exactly. Exactly.

25 BISHOP: That's kind of the position.

1 ROBLES: All this is right now is an assertion.

2 BISHOP: Right. Exactly. That's kind of what
3 you're trying to decide with this information.

4 BURIL: That's exactly right.

5 BISHOP: I just wanted to make sure I was clear.

6 MELCHIOR: With the three zones there we may
7 find it up top and we may find it at the bottom.

8 BURIL: Then we'll really sit back and ponder
9 it.

10 BISHOP: We're likely to find something that
11 doesn't quite fit either of those.

12 BURIL: You're right. Very easily.

13 CUTLER: That's the same rationale as for Well
14 22, is this whole edge of this hot zone is not well
15 defined. And these two wells help you to do that.

16 ROBLES: Let me make a copy of those. Can I?

17 NIOU: I appreciate it.

18 BISHOP: I totally understood what MW-22 is for
19 because we discussed that about three RPM meetings
20 before.

21 BURIL: Out at the parking lot there, or halfway
22 between 6 and that area?

23 BISHOP: The decision about putting those in. I
24 actually remember when Brian brought it up, was that
25 it's fine, if you don't want to put those in, you're

1 going to be assuming this goes all the way out to
2 the other side --

3 BURIL: Exactly.

4 BISHOP: -- for the pump and treat.

5 BURIL: Exactly. Right.

6 BISHOP: So there was some need to determine how
7 big an extraction system you would need if that's
8 what happens.

9 CUTLER: That's the primary purpose for Well 23.

10 BISHOP: I think what has happened, at least in
11 my mind, is we've gotten into this discussion of is
12 this coming from off site, does water chemistry show
13 this is from some other source, which is, to me, a
14 secondary consideration to how far does the plume
15 around the hot area extend.

16 BURIL: Which is fine.

17 NIOU: Yes. Yes.

18 MELCHIOR: Unfortunately, we may have taken a
19 tack to provide you this information to further the
20 justification for that location, since there seemed
21 to be reluctance of having a well, from the
22 regulatory standpoint, at the proposed MW-23
23 location.

24 BISHOP: To be honest, from our point of view,
25 and I'm not going to speak totally for Penny, but

1 I'll do a little bit for the regulatory end, is that
2 we're usually the ones that are accused of saying,
3 "Well, put another well in. Define it some more."
4 You get a little sensitized to that. Then everyone
5 says, "Well, all they want to do is put more wells
6 in."

7 BURIL: It's kind of the other side of the coin
8 here, isn't it?

9 BISHOP: Yes.

10 MELCHIOR: What's your thoughts about 23,
11 though? Are you in concurrence?

12 BISHOP: I am in concurrence that you have a
13 specific goal in mind, that depending on what
14 information you've got, it's going to support one
15 way or the other. That makes me a lot more
16 comfortable.

17 BURIL: Okay.

18 ROBLES: Let's take the assumption that it is
19 our plume. We've got a major, massive and complex
20 situation to clean up. And we're going to have to
21 sit down and really work at that. By the same
22 token, if it is not our plume, we've got a major,
23 massive, complex situation that we've got to deal
24 with. In either case, we've got to figure out what
25 to do.

1 BISHOP: Right. I was hoping you were going to
2 say that because I think it's very complex.

3 BURIL: It is extremely complex. There's no
4 doubt.

5 ROBLES: Because the key issue is, and let's us
6 assume for argument sake because I think that may be
7 your major concern, that it's not our plume, but
8 it's still going to impact our cleanup efforts.
9 It's underneath our property. How do we deal with
10 it? Those kind of issues have to be set down and we
11 have to discuss among ourselves one way or the
12 other. Those are the issues that we need to deal
13 with.

14 It's not our assumption that we are not
15 going to deal with someone else's plume. We've got
16 to deal with it in any type of feasibility study
17 that we do. My biggest concern is we may need to
18 look at going to Flintridge-La Canada and sitting
19 down and saying "We have a problem. How are we
20 going to deal with that --"

21 NAKASHIMA: That's why it is true that -- when
22 you said it's not your job to identify off-site
23 plumes, that's not true. It is part of your
24 responsibility because the contamination is coming
25 on your site. You'll be responsible for cleaning it

1 up. And when time comes to identify other parties
2 which you want to collect money from, that's how
3 it's done here -- that you will want to get
4 contribution from the other parties.

5 ROBLES: That I won't argue right now.

6 NAKASHIMA: You should have some concern about.

7 BURIL: I think we're really in a mode of trying
8 to understand what we're dealing with.

9 NAKASHIMA: I'm just trying to address his
10 comment it's not his job. There is some concern on
11 your part.

12 ROBLES: There is legal precedence to support my
13 argument with you on those points. But, I think, it
14 is too early in the process to debate this issue
15 with you right now.

16 BURIL: Yes. We need the data to understand do
17 we have something off site that's influencing us.
18 Do we have a concern here on site that's extended
19 beyond our borders? What is it that we're dealing
20 with?

21 BISHOP: I think one of the things that's going
22 to help a lot is to have the regular monitoring over
23 time.

24 BURIL: Yes.

25 BISHOP: One of the things that seems to be --

1 we've got a certain amount of data, but there are so
2 many anomalies in it that it's hard to say are these
3 anomalies because there are anomalies with the data.
4 Sometimes data goes up and down and you don't have
5 any reason for it. Other times if you start seeing
6 a pattern. And I just don't think we have enough
7 data.

8 BURIL: You're right. We don't have enough.

9 MELCHIOR: We want to make sure we don't
10 exacerbate the situation. If we find contaminants
11 at a certain depth in 23 and it's in a certain depth
12 at 10, that factors into our engineering mind as to
13 how to deal with the situation. We don't want to
14 have to draw contaminants from one part of the site
15 to the other and exacerbate the problem, basically.
16 So all these kind of factor into the rationale for
17 it.

18 ROBLES: I think the hydrogeology may make the
19 legal issues moot. But as I said, again, it's still
20 too early.

21 BISHOP: Right.

22 ROBLES: I'm not going to get into an argument
23 whether we should or shouldn't. Right now I think
24 we need to understand what's happening, and then we
25 can deal with the legal ramifications later on.

1 That's my biggest concern. That's all I'm saying.
2 The issue of who has responsibility to do what right
3 now is still too early to call. And I won't
4 concede, Penny, one way or the other because I don't
5 know. I don't know the total legal precedence or
6 ramifications of this issue.

7 It may be that the complexity of the
8 contamination, if it's so commingled, may make a
9 moot point. To treat the contamination we'll have
10 to work with Flintridge-La Canada and Pasadena
11 because there's no way we can clean up the
12 contaminated areas that we may have to deal with.
13 That's what the data has shown to us. Is the
14 hydrogeology more complex than we ever thought and
15 what data do we need to find out what is coming on?

16 BISHOP: I'm just going to throw in, from what
17 my experience is, it usually works better to work
18 with them.

19 BURIL: Agreed. Absolutely.

20 BISHOP: If there's a commingle problem, trying
21 to come to some --

22 ROBLES: Well, as we stated in the past
23 meetings, they came to us at one of their Regional
24 Board meetings or water company board meetings over
25 there in Flintridge to ask us if we had any PCE.

1 BURIL: Yes. In fact, I'll relay that story.
2 I'm not sure Penny remembers it, or Jon. It may
3 have been before your time. Certainly before your
4 time.

5 The Valley Water Service Company, if you
6 take a look at the map on the left-hand side, you see
7 on the far left-hand edge of the map kind of
8 two-thirds of the way up you see a red dot there,
9 just above Flintridge School for Boys. That's the
10 approximate location of the wells for Valley Water
11 Service Company. There's actually a field of wells
12 there.

13 RICHARDS: Right along here. Right here.

14 BURIL: Right there. That area there has a
15 documented problem with PCE. The water company
16 there already has a stripping tower in place that's
17 cleaning that stuff up before they send it out to
18 their customers. And they were really anxious to
19 have us do our remedial investigation because they
20 were figuring, well, my gosh, that's a Superfund
21 site. It must be a pretty obvious location for this
22 stuff to be coming from. The fact that we were
23 seeing this flow reversal phenomena occur
24 periodically, not even periodically but
25 sporadically, may give them some reason to think

1 that, well, yeah, once it gets pushed that direction
2 and then our wells catch it and pull it in, why
3 wouldn't we find it.

4 But one of the things that struck us here
5 is that on site we have very little, if any, PCE.
6 And it certainly isn't approaching the
7 concentrations that they find in the Valley Water
8 Service Company, which during approximately this
9 time of year begin to peak up in the hundreds of
10 parts per billion. We don't have anything even
11 approaching that. We're orders of magnitude below
12 that. So it raises another question, what's going
13 on? How do we figure out, if we do have a concern
14 with something coming down what I term the Foothill
15 funnel, between that set of hills right there and
16 the ones we happen to be butted against right here,
17 if there's something coming through there, how does
18 that influence us? What do we have to do to try to
19 understand how we remediate?

20 Those are questions that we're still
21 trying to struggle with. Well 23 is at least the
22 first piece of trying to fit that puzzle together.

23 ROBLES: What do you think about 23, each of
24 you?

25 LOWE: I don't have a problem with putting in

1 23.

2 NIOU: I don't have a problem.

3 ROBLES: How about you folks?

4 BURIL: I think Jon has already pretty much
5 agreed to it. Penny is not convinced, I can see.

6 NAKASHIMA: No. So you're putting it in for the
7 purpose of identifying the plume and it's not for
8 identifying your PCE, where that's coming from.
9 Right?

10 BURIL: No. No.

11 NAKASHIMA: Okay. Because before, that was
12 something that was brought up.

13 BURIL: We'll get information about that that
14 may aid us in understanding the picture overall.

15 NAKASHIMA: Because the PCE that you're finding
16 on your property --

17 ROBLES: But that's not the reason we're putting
18 it in.

19 BURIL: No. PCE is not there. No.

20 NAKASHIMA: You had mentioned that previously.

21 BURIL: Right. We have a lot of different
22 things here this well will answer for us. It may
23 help us figure out what's going on. It could ask
24 more questions. We don't know.

25 NAKASHIMA: Do you have any other contaminants

1 besides PCE in those other wells, that you know
2 about?

3 BURIL: They do have TCE. I would have to go
4 back. The big ones that I recall that had some
5 possible impact on JPL were the PCE and TCE. Now,
6 they have never --

7 NAKASHIMA: Do you recall what the TCE levels
8 were?

9 BURIL: They were in the 10s. 1s and 10s.

10 Now, I do recall that at that location,
11 again this is the Valley Water Service Company, we
12 have never been told that they have found carbon
13 tet. We tend to look at that as what we term one of
14 our signature chemicals. We haven't really been
15 able to find any reasonable use of that material at
16 other locations other than JPL. So if we find
17 carbon tet without having the knowledge that someone
18 else used it, we tend to look at it and say it's a
19 pretty good chance that it's ours.

20 LOWE: Are they not sharing the results of their
21 water sampling?

22 BURIL: They are, but they don't do it monthly.

23 ROBLES: I think they do it quarterly.

24 BURIL: They do it quarterly for the volatiles,
25 but they do it monthly for water chemistry. So when

1 they do the quarterly stuff, we see that. We have
2 it going all the way back to the mid '80s. They've
3 been very cooperative with us. They've really
4 worked with us very carefully.

5 ROBLES: We attend their meetings and everything
6 else. They're looking at what is happening with our
7 RI effort and results.

8 BURIL: Ron Palmer, who is the head of the
9 Valley Water Service Company, when I told him that
10 we're finding very little, if any, PCE, the look on
11 his face was kind of like a hurt puppy. It's like,
12 "Oh, no, my source, it's gone. What do I do now?"

13 So we share data with him, and they've
14 been very good with us as far as sharing data. In
15 fact, the bulk of the regional data that we have in
16 our computer modeling effort came from Raymond Basin
17 Management Board.

18 ROBLES: What do you think, Penny? Can you live
19 with it?

20 NAKASHIMA: Can you explain, though, how this
21 works in? The contaminants that you have in this
22 Well 13, 8, 16 and 7 are the same contaminants that
23 you have down in 10 and you think it's a separate
24 plume?

25 MELCHIOR: We didn't say it was a separate

1 plume.

2 BURIL: We want to verify that it is or isn't.

3 ROBLES: We don't know.

4 MELCHIOR: We want to know the vertical extent
5 of the contaminants at that area.

6 CUTLER: We think there's a possibility.

7 NAKASHIMA: I thought you just said to Jon
8 earlier that you want to find out if this is a
9 continuation of a plume or a separate one.

10 MELCHIOR: Absolutely. I think that's what I
11 just said.

12 BURIL: It's an either/or. That's what we need
13 to understand.

14 ROBLES: It's an either/or.

15 NAKASHIMA: All right. It just seems to me the
16 contaminants are the same.

17 BURIL: Let me ask a quick question. Mark, have
18 we seen in Well 10 carbon tet in similar
19 concentrations as we do up near --

20 CUTLER: I don't think we've ever seen carbon
21 tet in 10.

22 NAKASHIMA: You have carbon tet in 10.

23 BURIL: At what level?

24 NAKASHIMA: I don't know. See, and then also,
25 is this water that's coming from off site, is this

1 bringing in contaminants, or is this bringing in
2 some water that's not contaminated?

3 BURIL: That's another question we're hoping to
4 answer.

5 ROBLES: Could be. It's conceivable.

6 BURIL: It's conceivable. Like we said, we have
7 a -- go ahead, Pete.

8 ROBLES: You can draw up any scenario you want
9 to.

10 BURIL: Yes. We simply want to try to answer
11 some questions that we have.

12 Believe me, with NASA's budget the way it
13 is right now, we're not overly willing to go out and
14 spend a quarter of a million dollars to install a
15 well unless we think it's really necessary.

16 ROBLES: In the long run the feasibility will be
17 impacted. If that is our plume, we have major
18 issues to deal with. So the key is, we need to
19 know. It's not just a frivolous investigation for
20 us. And we don't believe that any feasibility that
21 is proposed will ever pass public scrutiny if we
22 don't know what that is.

23 NAKASHIMA: Look at one more thing.

24 LOWE: Would it be useful to table this issue
25 until tomorrow and give Penny this evening to look

1 through a couple more things?

2 MELCHIOR: This has been going around.

3 ROBLES: We need resolution.

4 LOWE: But today or tomorrow.

5 BURIL: If we can get an answer one way or the
6 other tomorrow.

7 ROBLES: That would be perfect. We need an
8 answer before we leave because we're at a
9 standstill.

10 MELCHIOR: We're not sure what the dilemma is
11 here.

12 CUTLER: It could show exactly what you're
13 thinking. It could confirm exactly what you're
14 thinking.

15 BURIL: In terms of an extra data point, is
16 there a concern that this will generate data that is
17 of no use?

18 NAKASHIMA: No, no. I'm just concerned that is
19 it really necessary to put this in. I know Peter's
20 big concern is cost. Can you look at the data that
21 you have now?

22 ROBLES: But there will be more cost if we do a
23 feasibility and remediation without that data.

24 MELCHIOR: Properly evaluate the cost impacts of
25 extraction systems.

1 NAKASHIMA: Maybe you can explain to me, then,
2 how the contaminants in here are not related to --

3 MELCHIOR: We don't need to explain that at this
4 time. That's not what we're asking to do.

5 NAKASHIMA: You don't need to?

6 ROBLES: No. We don't know.

7 NAKASHIMA: That's what's going to convince me.

8 MELCHIOR: What's the vertical extent of the
9 contaminants south of MW-13, Penny? As a regulator,
10 you should be concerned about that.

11 NAKASHIMA: Well, you have MW-10.

12 MELCHIOR: Which is a shallow well.

13 BURIL: MW-10 is a shallow well.

14 CUTLER: It's a standpipe well.

15 NAKASHIMA: Which one is the one that has the
16 screen? Oh, that's 4.

17 BURIL: Yes. That's quite a way off to the side
18 there.

19 NAKASHIMA: I thought MW-22 was going to define
20 your --

21 BURIL: That's in another direction.

22 MELCHIOR: That's to the west.

23 NAKASHIMA: Your vertical and your --

24 MELCHIOR: That's to the west.

25 BURIL: The scale of this map may be a little

1 bit deceiving. If you look where MW-22 is going,
2 it's behind Building 180 there.

3 When you look at where MW-23 is going to
4 be going, you're talking a distance of almost 400
5 feet. That's a pretty good distance to be separated
6 by, especially when you're talking in terms of a
7 remedial action and having to increase the remedial
8 action size.

9 Let's say in the best case you're going to
10 just go out to MW-22. But then you're also going to
11 possibly go out all the way to MW-10 because you
12 don't know any better. That's a tremendous
13 difference than what you might have if you go only
14 to MW-23.

15 NAKASHIMA: And then the well south of MW-10 is
16 a multi-port. Right?

17 BURIL: South of MW-10?

18 NAKASHIMA: Right.

19 MELCHIOR: Meaning MW-21?

20 BURIL: 21? Yes, that's a multi-port.

21 MELCHIOR: That's a quarter to a half mile away.

22 NAKASHIMA: But you found something, detected
23 something.

24 BURIL: TCE in the top screen.

25 NAKASHIMA: TCE. Now, what depth is that?

1 BURIL: Mark, do you recall?

2 Vince, do you recall?

3 CUTLER: 40 feet below water level. Water level
4 fluctuates. When it was put in, I think it was like
5 40 feet.

6 RICHARDS: 50 feet to water.

7 RANDOLPH: About 50 feet. Yes.

8 BURIL: Of course now, the shallowness of that
9 in comparison with what we've seen in the lab may be
10 explained somewhat by the topography as well.
11 You've got an 80-, 90-foot difference in elevation.

12 CUTLER: Right. That's just relative to water
13 level. That's where the screen is, about 40, 50
14 feet below water level.

15 NAKASHIMA: All right. Can I let you know
16 tomorrow?

17 BURIL: As long as we can get an answer
18 tomorrow.

19 NAKASHIMA: Yes. Tomorrow.

20 BURIL: That would be fine.

21 ROBLES: Okay.

22 BURIL: Moving on, then. Number 3. Actually,
23 I'm hopeful that this particular one is also a
24 no-concern type of situation.

25 I'm going to dig out that particular

1 figure here to remind myself where it is.

2 What we were talking about, it's one for
3 Figure 12 on the response.

4 Let me just give you the general location
5 of it. We're talking here on Aero Road. Well 7 is
6 over here. Well 16 is over here. And soil vapor
7 well 16 is just under this green dot here. It's the
8 yellow dot here. This is the one that had the very
9 high carbon tetrachloride vapor concentrations that
10 increased with depth. It gave us a good indication
11 that maybe there's something going on here and we
12 should investigate.

13 And, in fact, that's part of what our soil
14 boring approach identified as wanting to do that.
15 We can talk about that down the road.

16 Now, we are talking about moving Well 24
17 to somewhere along this area. It's really going to
18 be based principally on access issues as opposed to
19 anything else because we have to get a drill rig and
20 support equipment in there as close as we can to
21 this area. It gives us kind of a split of the
22 difference here, gives us another data point a
23 little further south.

24 It's more intended not so much in terms of
25 the lateral extent as it is the vertical extent,

1 like we talked before. It is going to be a deep
2 well with multi-port construction.

3 BISHOP: We looked at that with B.G. when we
4 went out.

5 BURIL: That's right. I forgot about that.

6 BISHOP: We went and walked around that area to
7 look at the locations.

8 ROBLES: So what do you folks think?

9 BISHOP: I don't have any problem with that.
10 That's exactly what we were talking about before. I
11 think it makes more sense than the original
12 location.

13 NIOU: So you will be drilling four additional
14 soil vapor wells. Right?

15 BURIL: That's correct, in addition to that one
16 deep groundwater monitoring well I just pointed out.

17 NIOU: I just have one question; not objecting.

18 On the third dot on page 11, you mention
19 that you will be collecting gravel soil cuttings at
20 50-foot intervals. Can you provide a rationale?

21 BURIL: For that?

22 NIOU: Yes.

23 BURIL: The only reason we're sampling the soils
24 at those locations at all is simply for disposal
25 purposes, to know how to get rid of the soil. They

1 aren't at already known source areas, and because of
2 that we don't anticipate finding any contamination
3 in the soils themselves. You would have to have
4 some source above in order to bring it down and
5 actually be able to tap into that. We're laterally
6 away a good distance from any of our identified
7 sources. So we don't anticipate finding anything at
8 all.

9 NIOU: I thought those may be related to the old
10 soil boring that showed high concentration of TCE
11 down deep. Are they?

12 BURIL: I'm not following you, Steve.

13 NIOU: Remember last meeting when we discussed
14 deep soil vapor concentrations that we found one of
15 them increasing?

16 BURIL: Right. We're planning to install these
17 vapor wells with the idea of going all the way to
18 the capillary fringe, as close as we can understand
19 where that is, to identify whether we have an
20 increasing concern all the way down. We're looking
21 at the vapor facet of this as opposed to anything
22 that might actually be bound to the soil. That's
23 really what we're looking at.

24 We don't anticipate finding non-volatile
25 contamination there because we don't have a source

1 that would be supplying it at those locations.
2 We're more concerned about the volatiles and that's
3 why we're focusing on the vapor well aspect.

4 Is that --

5 NIOU: Sure. The reason I ask is, it seems,
6 then, you would place close that soil boring that
7 you had before. But according to what you said, it
8 confused me. Seems that you're saying it will be
9 some distance away from that so that there will be
10 no source or something. That's why I have that
11 question.

12 BISHOP: I think we kind of jumped to the other
13 topic. Maybe we could get to that as we get there.

14 BURIL: In time.

15 BISHOP: There are more issues I think we need
16 to talk about.

17 BURIL: That we're coming up to.

18 BISHOP: The additional vapor assessment.

19 NIOU: Oh, I thought we were already in that
20 topic.

21 BISHOP: No. We're on page 2.

22 BURIL: No, not yet. I think we just hit page
23 3.

24 NIOU: I thought we are on additional soil vapor
25 wells for OU-2. That's why I started to ask the

1 questions.

2 BURIL: No. We're going through the response
3 itself. We're up at page 3 right now, Steve. 4a.

4 NIOU: I thought you were going to dot 3 on the
5 meeting agenda. I'm sorry.

6 BURIL: That's okay.

7 LOWE: How deep were you going to drill MW-24?

8 CUTLER: Propose to go to 750 feet.

9 BURIL: That's right. I wanted to say 700.
10 750, and have a total of four screens.

11 Right?

12 CUTLER: Five.

13 BURIL: Five screens.

14 CUTLER: Wells 22 and 23, they'll have three
15 screens each and go to about 450 to 500 feet deep.

16 Well 24, five screens, about 750 feet.

17 ROBLES: If you don't hit something.

18 CUTLER: Right. Exactly.

19 BURIL: If we start finding something as we go
20 deeper, we could very easily be going deeper. We'll
21 have to see as we go along.

22 BISHOP: Are you going to be able to sample as
23 you go? That's usually not a --

24 CUTLER: No. I think Peter said if we hit
25 basement or something, we won't go that deep,

1 obviously.

2 BURIL: Unless we somehow come up with something
3 that begins to smell obviously very bad, then we
4 might consider something. I doubt that would ever
5 happen.

6 BISHOP: I've worked on a project where they
7 tried to determine as they went, the depth. That's
8 really hard --

9 BURIL: That's almost impossible.

10 BISHOP: -- to make that work and get the
11 samples. So that's why I was wondering what you
12 were saying, if you were going to try to do that.
13 Kind of scary.

14 BURIL: No. It would be kind of catch as catch
15 can. If we hit something that's obviously bad, then
16 we might consider doing something else.

17 Okay. So it seems to me that Well 24 is
18 taken care of. We have your concurrence and we can
19 move forward with that. Right?

20 NIOU: Right.

21 CUTLER: Item number 3 is okay.

22 BURIL: Number 3 we're set.

23 Okay. On to number 4. Let's see. I'm
24 hopeful that on a couple of these things we can
25 probably skip by. 4a I think kind of sets our

1 position. I'm not sure we need to dwell on that.

2 4b, again, this is something that we were
3 just trying to share information with you in the
4 best way we could. Just to reiterate, we don't
5 anticipate making those maps a permanent part of the
6 project. They are not going to be memorialized in
7 any way. As we get into things, we can get a better
8 understanding. They may change or they may not.
9 We'll be discussing that with you all the way down
10 the line.

11 BISHOP: I just want to comment real quick on
12 that.

13 Obviously, these are conceptual
14 interpretations of the data. They don't have to be
15 marked "Draft" for everyone to believe that they are
16 interpretations.

17 BURIL: Okay. Good.

18 BISHOP: I don't know if you folks feel the same
19 way, but they're always open to interpretation.
20 Whoever draws the contours draws them the way they
21 see the information.

22 CUTLER: The point that's made in here, too, I
23 just want to reiterate, that fault marked on there
24 is the surface trace. It's a 45-degree thrust
25 fault. If you go down 250 feet to groundwater level

1 where that plume is detected, that fault is going to
2 move 250 feet to the north. So really, I don't
3 think those contours cross a fault. On this map
4 they do, but in real life, a technicality.

5 BURIL: Does everyone follow what Mark is
6 indicating?

7 NAKASHIMA: Yes.

8 CUTLER: We did not mean to go across a fault.

9 BISHOP: By the time you get there --

10 BURIL: By the time you get there it's past the
11 fault in the plan view.

12 BISHOP: Right.

13 NIOU: So what you're saying is the water level
14 is 200 feet below ground. Right?

15 CUTLER: Right.

16 NIOU: Therefore, you go 200 feet north --

17 CUTLER: Is the actual fault. The fault drawn
18 on that map is a surface trace. You don't have to
19 cross a fault with contours.

20 ROBLES: Why don't you just draw it.

21 BURIL: If you look at it just in cross-section,
22 Well 7 is here. Mark or B.G., if I misdraw this,
23 correct me.

24 The fault goes back like this. And what
25 we're talking about is when you get down to

1 groundwater here, we're talking about the contours
2 coming out in this area. And you're still in an
3 area that is, quote, below the fault. We're not
4 talking about there's contamination up in here.

5 Okay. Then we're up to number 4c. I
6 guess we just would look to you folks to give us
7 what your thoughts are regarding our interpretation
8 of the data that we've looked at and get a feel from
9 you as to what your concerns may be.

10 NAKASHIMA: These are not all the points,
11 though, on this Figure 16? You have some other ones
12 in, you said, Building 299?

13 BURIL: You should have a variety of things
14 there, actually. If you look at the map itself with
15 all the green dots and everything. Let me show you
16 what we've got here, Penny. It makes it a little
17 easier.

18 BISHOP: It depends on which phase they were
19 doing it.

20 BURIL: That's exactly right, Jon.

21 BISHOP: It took me a long time to figure that
22 out.

23 BURIL: It's confusing when you look at it the
24 first time.

25 ROBLES: If you have one map with all the dots,

1 you have black.

2 BURIL: Right.

3 The red dots are the locations that we
4 actually identified the seepage pits at. The green
5 ones that I'm going to overlay are where we actually
6 put in the soil vapor probes and did analyses for
7 shallower soil gas. We actually went right through
8 the floor in Building 299, and also right outside
9 here.

10 The yellow dots that you see, these are
11 offset somewhat so you can actually see them. In
12 terms of the position, they're not offset. Like,
13 for example, here, Well 10, probe 50 and soil pit 30
14 were all essentially put in the same location.

15 BISHOP: I think, at least for me, I have
16 difficulty figuring out with the number of -- I
17 would look at one map and I'd say this says soil
18 vapor probes and I don't see anything up there.
19 Well, that was either from a different year, a
20 different phase or before the RI or after the RI.

21 BURIL: Exactly.

22 BISHOP: So I'm going, we've got the hottest
23 thing just south of that, we don't see anything,
24 forgetting that the maps were divided by were they
25 soil borings? Were they soil vapor or were they

1 soil vapor wells? Were they pre RI? Were they in
2 the RI?

3 What may help, and I'm not necessarily
4 saying you need to do this, but at certain times you
5 may want to say this is the area we're concerned
6 with, blow that section up and put everything you've
7 got on that section.

8 BURIL: That's a good suggestion.

9 BISHOP: Instead of always doing it on this
10 large map.

11 BURIL: That's a good suggestion.

12 ROBLES: That might be a good idea.

13 BISHOP: That way we don't get in a position
14 where we're asking you to do something because we
15 can't find everything.

16 BURIL: That's an excellent suggestion. We will
17 probably take that under advisement and we'll
18 hopefully do something for you in that regard in the
19 RI report.

20 NAKASHIMA: It would be nice to see the
21 groundwater data, too.

22 BURIL: In that same kind of approach?

23 NAKASHIMA: All together.

24 BISHOP: What I've done for some of the stuff
25 that I've worked on is I've taken just a small area

1 out of the large map, blown that up and put the
2 different things, because you can't put them all on
3 a large-scale map. You can't see everything.

4 BURIL: Sure. I'm happy to say we actually have
5 that capability now because we've gotten all these
6 maps computerized.

7 BISHOP: What kind of system are you using?

8 BURIL: Auto CAD.

9 ROBLES: I want to see if we can do that, the
10 quadrants that have that on them, to blow those
11 quadrants up. If there's nothing required we won't.

12 BISHOP: Right.

13 ROBLES: Only those quadrants that you're
14 looking at so that you can match the quadrant to --

15 BISHOP: That makes sense, yes.

16 BURIL: Does anyone want to take about a
17 five-minute brief break?

18 BISHOP: Sure.

19 (A recess was taken from
20 10:45 A.M. to 11:05 A.M.)

21 BURIL: Okay. We're back.

22 We're up to 4c, weren't we?

23 ROBLES: 4. 4c.

24 BURIL: I guess we were again just looking to
25 kind of get some feedback from you folks about what

1 we've presented there, and go on from that.

2 BISHOP: Well, my feedback is that I got lost,
3 actually, in the data. I don't necessarily feel
4 that we need to go do more work in that area now
5 that we've identified that there actually was the
6 work there. And as we said right before the break,
7 we could suggest some way of --

8 BURIL: Presenting that data in a more cohesive
9 fashion.

10 BISHOP: Yes. It would be easier for me to
11 follow.

12 BURIL: Sure. Your suggestion of taking
13 sections and blowing them up is a good one. We'll
14 take that to heart.

15 ROBLES: What about you?

16 LOWE: I agree with Jon.

17 NAKASHIMA: I agree also.

18 NIOU: Me too.

19 ROBLES: So what do we want to do? Do you folks
20 want to wait until the data? Do you want to say?
21 What do you want to do?

22 BISHOP: I think from my point of view, and
23 everyone else can jump in if they have different,
24 when we were going through and trying to determine
25 where we were, it looked to me that the area of

1 highest concentration was right south of the fault
2 and what I was looking at showed nothing right north
3 of the fault, and that needed to be determined if
4 that was contributing to that.

5 BURIL: Sure. That's understandable.

6 BISHOP: When we started looking at the other
7 data points and seeing that actually when you get
8 them all together and superimpose them, that area
9 was actually covered. I don't see any need to
10 postpone that decision.

11 BURIL: You've got everything that you need,
12 basically?

13 BISHOP: Right.

14 BURIL: And you all agree with that. So north
15 of the fault issue is no longer an issue. Great.
16 Wonderful.

17 I guess we're up to where you jumped to,
18 Stephen. We're up to Operable Unit 2.

19 NIOU: Yes. I was mistaken.

20 BURIL: I guess we can take this piece by piece.
21 I don't know if it's a similar situation or not, but
22 we do have some stuff that we identified here as
23 being some data to reflect on. I guess if we just
24 look at the different subsections for Operable Unit
25 2 and see if you have a concern about information

1 that we say is already available and whether that,
2 in your opinion, is adequate or inadequate, and for
3 what reason, and you could go from there.

4 So 1a.

5 NAKASHIMA: Well, you have a statement in here
6 about Wells 3, 9 and 12 not showing significant
7 contamination.

8 I had thought that there was contamination
9 that was showing up in those wells, 3 and 12.

10 BURIL: At what time frame, Penny?

11 CUTLER: Where are we?

12 ROBLES: Operable Unit Number 2, 1a, the comment
13 says "Previous data for groundwater wells 3, 9 and
14 12 show no significant contamination present."

15 CUTLER: "No significant." Okay.

16 NAKASHIMA: What do you mean by "significant,"
17 then? Maybe you should define that.

18 BURIL: It's not in excess of MCLs, as far as I
19 can recall.

20 NAKASHIMA: Except for the carbon tet, maybe.

21 CUTLER: Right.

22 BURIL: At which well, Penny?

23 NAKASHIMA: 12, screen 3.

24 BURIL: But again, if it's in screen 3, let's
25 take that as a given without bothering to look it

1 up. That would indicate to me that you've got a
2 situation where your contaminants are sinking. If
3 we had a concern of a source in the immediate area
4 that is identified there, you would expect to see it
5 in screen 1 and you would expect to see it in the
6 standpipe wells as well.

7 NAKASHIMA: Well, you have lesser amounts in the
8 other screens, I think. I need to find the data.

9 BURIL: Let's see. I'll try to find it as well.
10 You're looking at Well 12. Right?

11 CUTLER: In Well 12 it doesn't start until
12 screen 2. There again, it gets back to our --

13 NAKASHIMA: It doesn't start exceeding MCLs
14 until screen 2, or it's not detecting it?

15 BURIL: It's not detecting it.

16 CUTLER: It's not detected until screen 2.
17 That's why we tied that in to the carbon tet
18 detected in Wells 7, 16 and 13. Okay? Because by
19 the time it gets to that part of the site, it's
20 sunk, so to speak. If Well 12 is immediately
21 adjacent to a source, we'd expect it to be in the
22 first screen. I think that's what --

23 BURIL: That's my point exactly. And if you
24 look at the other wells there, Penny, if you look at
25 9 and 15, my recollection is that carbon

1 tetrachloride is not detected at all.

2 CUTLER: So if you look at those plume contour
3 maps, the preliminary ideas that we gave out at a
4 couple RPM meetings, very similar to what we just
5 handed out on TCE, you'll see the same thing where
6 it is one plume, but it's only showing up in the
7 lower screen as you get to the edge of the site.

8 BURIL: That supports, I think, what intuitively
9 we could all understand, that is that during the
10 times where the contaminants were migrating from the
11 areas of high contamination located on Lab they were
12 sinking as well. And that makes a lot of sense from
13 the standpoint of knowing that these things are more
14 dense than water, and so on and so on.

15 If we had seen it at the very top screen
16 in addition to the deeper screens, I'd say that we
17 would have a different kind of concern.

18 ROBLES: Comments?

19 BISHOP: I'm kind of getting confused, but is
20 this the long --

21 RANDOLPH: The old tow pool.

22 BURIL: The torpedo pit.

23 BISHOP: I'm just trying to keep track of it.

24 BURIL: So, Penny, do you have any other
25 questions or concerns regarding that particular

1 aspect?

2 LOWE: How close were the soil vapor probes to
3 where the pooling tank was?

4 BURIL: B.G., do you recall how close the soil
5 vapor probes were?

6 RANDOLPH: Those that are on the south side of
7 Building 302 were the closest we could get. Also,
8 we have one at the north end of Building 302, and
9 then out on Mariner. The two soil vapor wells, I
10 believe it's 21 and 24, they're up Mariner in the
11 tree planters.

12 BURIL: Why don't you show us where they are.

13 ROBLES: Could you show them up there?

14 RANDOLPH: Sure.

15 That tow pit is right here under Buildings
16 302 and 300. So we have soil vapor probes around
17 through here. We have the soil vapor wells in here,
18 in here and in here. But the old tow trench was
19 right here.

20 BISHOP: That was 22, did you say?

21 RANDOLPH: Not 22. I believe it's 21. 21 would
22 be by Building 302. No. That was 24. I think it
23 was 21.

24 NOVELLY: 23 and 24.

25 BURIL: 23 and 24.

1 RANDOLPH: 23?

2 NOVELLY: 21 is over by the cafeteria. 22 is by
3 300. 23 is by Building 103

4 NAKASHIMA: Is vapor point 6 one of the ones
5 near --

6 RANDOLPH: Didn't you see where I was pointing
7 them out?

8 NAKASHIMA: Yes. But does that include number
9 6?

10 RANDOLPH: Probe or boring, soil vapor well?

11 NAKASHIMA: Probe.

12 RANDOLPH: There's 57 probes. I can't keep
13 track of all of them.

14 If I remember correctly, soil vapor probe
15 6 is up here in front of Building 117.

16 NAKASHIMA: Okay. I have a 6 down here.

17 BURIL: I think it might be a B.

18 NAKASHIMA: Is that a B? This one right here.

19 Again, I don't know which survey that's from.

20 BURIL: Oh, okay.

21 RANDOLPH: Oh, that's boring 6. That's soil
22 vapor well.

23 NAKASHIMA: Boring 6. Okay. That's not a soil
24 vapor well.

25 RANDOLPH: That's a soil vapor well. There's a

1 soil vapor well in every soil boring that we
2 drilled.

3 NAKASHIMA: Okay.

4 BURIL: Are we in agreement, then, or what? I
5 haven't heard an opinion yet as to whether we have a
6 concern at that point at this time now that we have
7 the data identified, or if there's still a concern
8 out there.

9 LOWE: I have in my notes from a previous
10 conference call that you thought that was used as a
11 water tank. Why did you not discuss that in your
12 response letter?

13 BURIL: That was used as a water tank?

14 BISHOP: The torpedo one.

15 NOVELLY: I believe we said it was filled with
16 water, but it wasn't used as a water tank.

17 BURIL: No, it's not a -- when you say "a water
18 tank" --

19 ROBLES: Drinking water tank.

20 BURIL: -- your connotation is a drinking water
21 tank as opposed to --

22 BISHOP: No. I think what Debbie is trying to
23 say is --

24 LOWE: It was filled with water so it's not a
25 source.

1 BURIL: Oh, okay.

2 LOWE: I mean the State had brought it up as
3 something that needed to be investigated because it
4 was identified on an aerial photo. It seems like
5 the response should state that we think it was
6 filled with water and that's why we don't think it's
7 a source.

8 BURIL: Hindsight. You're right. We probably
9 should have mentioned that.

10 NAKASHIMA: Okay.

11 BURIL: No problem? No concern?

12 NAKASHIMA: No.

13 BISHOP: I would suggest, this is all going to
14 be eventually compiled into the RI, that these kind
15 of things that get brought up like this, it says,
16 okay, this was identified in the aerial photos, we
17 have wells here that already indicate we don't think
18 it's a problem. We also interpret the photos as
19 being a torpedo run with water in it and not a
20 sludge containment.

21 BURIL: A fair point to make.

22 BISHOP: You want to try and make sure there's
23 no ambiguity --

24 NAKASHIMA: Right.

25 BISHOP: -- when you're done with the RI. You

1 may convince us when we're talking here, but if
2 somebody reads that and says, well, look, you guys
3 never addressed this, it was brought up, it's going
4 to be --

5 BURIL: Reasonable.

6 ROBLES: Fair enough.

7 NAKASHIMA: If you can say, also, that the
8 contamination in the groundwater wells were in the
9 deeper screens and not in the upper screens --

10 ROBLES: And then just say "No contamination in
11 the well."

12 NAKASHIMA: And that all supports your position.

13 BURIL: The contention. Right. That's fair.

14 ROBLES: More technical argument. Okay.

15 BURIL: So 1a is resolved. There's no concern.

16 1b, we talked about soil vapor well 12.
17 This is the circular structure there in the middle
18 of the Arroyo that was used at one time as maybe a
19 garbage pit or something of that nature.

20 BISHOP: When you say "12," this refers to B-12?

21 BURIL: Boring 12, soil vapor well 12.

22 BISHOP: With the nondetects for all.

23 BURIL: Right.

24 BISHOP: You're right in the middle of it.

25 Okay.

1 NAKASHIMA: Okay.

2 BURIL: And then on sites H and I under 1c. So
3 1b is resolved. No issue there to be concerned
4 with.

5 1c, talking about sites H and I. I think
6 we've pretty well identified this as a possible
7 concern, which is why we've gone ahead at site I and
8 said, well, look, we don't know what it is, it's on
9 our property, we have responsibility to do so.

10 ROBLES: Site H.

11 BURIL: Site H.

12 Now, site I, we kind of hedged on that
13 because at the time we weren't sure that it was on
14 our property or not. We've since gone back and
15 looked at things and tried to figure it out. At
16 least half of that particular feature is on JPL
17 property. We don't know if it's all on there or
18 not.

19 NAKASHIMA: So you'll look at half.

20 ROBLES: We're going to look at both of them.

21 BURIL: We'll look at the whole thing. It's
22 there.

23 BISHOP: Those are the ones near the oak tree?

24 ROBLES: Yes. Bottom line is, government
25 property, it's 50 feet one way or the other when you

1 look at the maps and how close it is. So we felt
2 that we needed to look at both sites. It's proven.
3 If it's on the border, I'm not going to stick a
4 probe in one end of the thing and not look at it.
5 That doesn't make sense. No.

6 BISHOP: That's very enlightened of you.

7 BURIL: Darn nice of us, wasn't it?

8 Okay. So no problems on 1c.

9 Then 1d, I think we're very much in a
10 similar situation. We don't know what was in the
11 dump, and so we're willing to take a look at one
12 location, put in a well and do the soil boring and
13 understand what we're dealing with.

14 ROBLES: Is that okay with you folks?

15 BISHOP: Yes.

16 BURIL: We have consensus. Great. So we're
17 done with 1d. We're all agreed on that.

18 On 1e, this is looking at the outfall near
19 Building 103. And we already have a couple of soil
20 vapor wells there. Those vapor wells we identify
21 here showed no vapor phase contamination at that
22 location. The soil samples we took during the
23 boring of those locations showed that we didn't have
24 any elevated levels of nonvolatile compounds as
25 well.

1 So are you in consensus again? You're
2 satisfied with that data as being sufficient to rule
3 out further concern?

4 NAKASHIMA: Do you have a map of where the vapor
5 wells are?

6 BURIL: Let me show you where they are as
7 opposed to anything else. The vapor wells are right
8 here. The discharge came right through here. In
9 fact, Penny, when we walked the Arroyo that time, we
10 actually stood on top of this well. That was right
11 at the base of discharge.

12 NAKASHIMA: Right. I remember that area. You
13 were saying you were going to do something, take
14 samples?

15 BURIL: The digging of the trench was going to
16 be right there for looking for the other stuff. But
17 the volatiles portion of it I think we've already
18 addressed.

19 NAKASHIMA: Okay.

20 ROBLES: Any problem with that?

21 BURIL: So 1e is consensus. No problem there.

22 If, we just flatly didn't understand what
23 the concern was.

24 NAKASHIMA: When we went out for the walk, there
25 was a little terrace that was right near where the

1 outflow from the drainage, where the storage bay
2 dump was. There was a huge discharge pipe that went
3 into the Arroyo.

4 B.G., do you remember? And right next to
5 it, right adjacent to it was a terrace, sort of like
6 a terrace.

7 RANDOLPH: This is where the storm drain comes
8 out at the north end of the parking lot extension.
9 Right here the main storm drain that comes from
10 La Canada-Flintridge and crosses JPL comes out right
11 here and flows into the Arroyo. There is an
12 elevated, almost like a terrace right here along the
13 equestrian trail north of that discharge location --

14 BURIL: Is that what you're talking about?

15 NAKASHIMA: Right.

16 RANDOLPH: -- which is basically mostly fill
17 material that was used as a ramp to bring
18 construction trucks and the dump trucks up to build
19 the parking lot. That is this elevated area in
20 here. It has been disfigured since then, but it's
21 essentially in the same location and it's on the
22 aerial photographs that we went through, all those
23 obliques, that one time in the office.

24 NAKASHIMA: The reason I brought that up was
25 because I thought you had said that this was the

1 area of discharge and it flowed across that area
2 before the discharge pipe was in?

3 RANDOLPH: The old discharge, the north-south
4 main drainage that's referred to in some of the City
5 of Pasadena memoranda, field inspection reports back
6 in the '50s and early '60s, that main drainage came
7 down right through here, through the center of the
8 Lab, near the center of the Lab, and flowed out at
9 this particular area at the south end of the
10 Southern California Edison plant or substation.
11 Flowed out this direction. And essentially the old
12 flow line comes out at the same location where that
13 36-inch CMP storm drain is today.

14 That was the reason for putting another
15 hole about in here at the south end of the Southern
16 Cal Ed substation for that chromium discharge. It
17 did not ever come up as far north as where that
18 terrace is, on the east side of the equestrian
19 trail.

20 NAKASHIMA: Okay.

21 ROBLES: So what's the consensus on that?

22 BURIL: Are we agreed, then, that we need not be
23 concerned about that, that we're addressing it with
24 the work that we would be doing for 1d, the chromium
25 discharge past the dump, and so forth?

1 NAKASHIMA: Right, and with B.G.'s explanation.

2 BURIL: Okay. Great.

3 All right. So if is resolved. No
4 problem.

5 On 2a, I asked B.G. to bring the photos
6 along so we could show them to you, if you'd like to
7 see them, just to resolve in your own minds that
8 we've got the photos and you can distinguish that
9 the sludge piles that these folks are calling out
10 are actually just bushes.

11 B.G., do you have those available to show
12 them?

13 RANDOLPH: Yes, I do.

14 NOVELLY: B.G., do you want to refer what the
15 title on this folder is and then give us the year
16 for each one you refer to.

17 RANDOLPH: It's "JPL Historical Photographs,
18 1943 to 1992" that's been compiled by the
19 Environmental Affairs Office.

20 In the 1947 photograph, which is JB-358G,
21 the sludge pile can be seen as vegetation on that
22 particular photograph.

23 BURIL: Do you want to point right to it, B.G.,
24 so they can see it?

25 RANDOLPH: Right in here.

1 BISHOP: I think this is also essentially the
2 same kind of issue that we had earlier on, is that
3 the aerial photos compiled by EPA's Lab tentatively
4 identified that as a sludge pile. What needs to be
5 made sure is that it is addressed in some way.
6 You're showing us, and we're comfortable with that.

7 BURIL: We agree, and we can be sure we identify
8 that in the RI so there is no problem.

9 BISHOP: There's no question that there wasn't a
10 sludge pile lot that was never addressed.

11 BURIL: Sure. That's fair.

12 RANDOLPH: Going back to that EPA document, they
13 did not identify it as a sludge pile. They just
14 said it was a dark area and possible sludge.

15 BISHOP: Right. I think it was like tentatively
16 identified.

17 RANDOLPH: Right. Then later, on the next
18 photograph, which is six months later, they said it
19 was lighter in color. Of course, one was taken
20 during the winter when it was nice and green and the
21 other one was taken during the end of the summer
22 when everything had turned brown and straw colored.

23 That's the one photograph.

24 Photograph JB-111, I think that should be
25 1174A, you can see that it has been planted with

1 trees.

2 Here are photo enlargements of the same
3 photos that you looked at earlier. That's 1110U.

4 BURIL: Each one of these dots here is actually
5 a tree. Is that right?

6 RANDOLPH: Yes, sir.

7 And here is another photo, one that you
8 saw earlier, the first one. Again, vegetation.

9 These photos range from 1947 to 1953.
10 Here is one in 1950, which you can clearly see that
11 has been a vegetated slope. And this was a 1950
12 photo that was included as Figure 512 in the work
13 plan.

14 BURIL: Let's be fair about what this was
15 actually showing. It's showing that circular
16 structure. While you can see it, it's not one of
17 the things that we pointed out in the photo. In
18 fact, I think even the one under here probably shows
19 it even better. There's that circular structure and
20 there's the slope there, the vegetation.

21 ROBLES: So we need to clarify that more in the
22 RI.

23 BURIL: Yes. We'll be sure to explain that
24 fully in the RI. That's a very good point.

25 ROBLES: Reference to photographs, reference the

1 book and everything else.

2 BURIL: In fact, we should probably even
3 consider taking a photograph or two and putting it
4 in the RI in some fashion that's clear.

5 ROBLES: Yes. Yes.

6 BURIL: So, no problem with that one?

7 BISHOP: No. I don't have any.

8 NAKASHIMA: No.

9 BURIL: Okay. Great.

10 ROBLES: 2b.

11 BURIL: 2b.

12 I think we've stated pretty clearly what
13 our position is regarding aluminum oxide.

14 NAKASHIMA: State it in the RI.

15 BURIL: State it in the RI as well?

16 NAKASHIMA: Yes.

17 BURIL: So as far as aluminum oxide is
18 concerned, then, we have no further concern with
19 that.

20 ROBLES: We need to have a good technical
21 argument in the RI.

22 BURIL: I think if we take this and be sure that
23 it's explained fully, I think that would work out
24 well.

25 2c, as we indicated, actually is addressed

1 by 1d.

2 Under 2d, we're kind of at a loss as to
3 how to approach this, principally because, as we
4 talked before, we've got a situation where the stuff
5 is spread out so tremendously and so many erosional
6 and deposition-type events that we really have
7 absolutely no way of being able to figure it out.

8 Here is one of the things that we'll point
9 out. These are the tanks here that started out with
10 the discharge. Those are physically located up
11 here. Those are these two dots up here.

12 The discharge came right down the side of
13 the mountain into the Arroyo and then spread out,
14 heaven knows where. At that particular time no one
15 really paid much attention. Probably in this
16 general area. Now, that was back in '91, I think
17 was the time frame, was the last one.

18 RANDOLPH: May 1990.

19 BURIL: 1990. Thank you, B.G.

20 Subsequent to that, I don't know if any of
21 you came out in the winter of '92, but this Arroyo
22 here quite literally was filled to the brim from
23 here to here, all the way up into the parking lot of
24 Oak Grove Park and across to this side. There was
25 like 60 feet of water behind Devil's Gate Dam. If

1 there was anything that we could find, it spread it
2 to such degree we feel that we're never going to
3 find it.

4 ROBLES: If you also look at the picture on the
5 other side of this wall as you walk out there will
6 be a picture of the Arroyo Seco full of water
7 showing a picture of JPL across this lake. And the
8 lake is the Arroyo Seco.

9 BURIL: That was the year I think we got
10 something like 22 inches of rain here. There was
11 just a tremendous amount of water. It all came at
12 once, it seemed like. The diversion levy at the top
13 of the headworks, just as an aside, the headworks of
14 the L.A. County Flood Control District works that
15 feed the basins out here, that levy washed out five
16 times that year. It was a tremendous amount of
17 water that came rushing down.

18 MELCHIOR: And also, one of the things, in the
19 past we have sampled MW-1 and never identified PCE.

20 BURIL: Right.

21 MELCHIOR: Or any telltale sign of PCE.

22 BURIL: I think one of the things we could look
23 to as a failsafe consideration is that we already
24 have a monitoring well network in place. We can
25 watch for PCE. We're already doing that. That

1 would be part of the long-term monitoring program
2 that I think we've already identified for you. And
3 in that regard, if something jumps up, whether it be
4 from that discharge or something else in terms of
5 PCE, we'll be able to identify it and deal with it
6 at that point.

7 ROBLES: What are your comments?

8 NAKASHIMA: I was just going to say that I guess
9 when you address this in the RI, your first
10 paragraph says it is extremely diluted PCE, which is
11 not hazardous. However, there were three separate
12 discharges that occurred.

13 So I don't think it's -- it was a
14 significant amount.

15 BURIL: In terms of volume.

16 NAKASHIMA: In terms of volume and concentration
17 as far as exceeding MCLs in all three cases.

18 So I wouldn't downplay it as --

19 BURIL: I wouldn't say that we would try to
20 downplay that in the RI. I think if we identify
21 there were three separate discharges that contain
22 PCE and that during the course of time the following
23 events created the situation that we face today and
24 because of that situation we deemed it was not
25 feasible to actually sample for it, we do have the

1 monitoring well network and we are monitoring
2 groundwater, it should be no problem.

3 ROBLES: That's pretty good, to take that into
4 advisement to put it into the RI. That's a good
5 point, Penny, would be the best way to do that.

6 BURIL: That's fine.

7 BISHOP: You don't want people to look at it --
8 because when I read it I look at it as a
9 justification for the discharge being okay.

10 BURIL: No. No. That's not what's happening.

11 BISHOP: That's not what you're trying to do
12 here.

13 BURIL: No.

14 BISHOP: So you don't want to have it look like
15 that's what you're trying to do.

16 BURIL: Exactly.

17 ROBLES: Okay.

18 BURIL: Okay. So that one is a no problem.

19 ROBLES: 3.

20 BURIL: 3. Okay. We are on 3.

21 This goes to the question about what it is
22 that we would need to do as far as sampling in those
23 trenches that we've already proposed to you. I
24 think our position is fairly clear. Just what
25 comments you folks have as far as what you see

1 there.

2 NAKASHIMA: You state that you're not going to
3 take any samples from the walls or the bottom of the
4 trench. Why are you going to trench?

5 BURIL: No, no. We're not going to take
6 multiple samples. In other words, meaning let's say
7 we dig down, and say there's a fine layer of soil
8 that we see in a wall here and there's another one
9 here and then there's the bottom. We're not talking
10 about taking three samples in that trench. We're
11 talking about picking one that would make sense to
12 sample and sampling that.

13 NAKASHIMA: How are you going to determine which
14 area to sample?

15 BURIL: It would be a call in the field.
16 There's not really anything that we could identify
17 as being something other than a review with an OVA
18 or a PID that would give us an indication, other
19 than visual inspection.

20 NIOU: Penny, when they do the sampling at the
21 trench, would you like to be there?

22 NAKASHIMA: Yes.

23 NIOU: So that you can have physical instruction
24 or preference?

25 BURIL: That's fine. I would welcome that,

1 actually. If you feel like you want to do that,
2 that would be fine.

3 NAKASHIMA: So how many samples are you going to
4 take?

5 BURIL: We have a total of, what, five trenches,
6 B.G.?

7 RANDOLPH: Right now we've only got two test
8 pits. We're taking one sample from each.

9 ROBLES: What's going to be proposed for the
10 future?

11 RANDOLPH: That was what was proposed.

12 BURIL: That was it.

13 NAKASHIMA: One sample for each.

14 RANDOLPH: These pits, if we get down five feet,
15 we'll be lucky.

16 MELCHIOR: Because of the boulders.

17 RANDOLPH: Yes, sir. We're looking at three to
18 five feet maximum depth being able to dig or
19 excavate with a backhoe.

20 NAKASHIMA: Will you have some provisions for
21 taking extra samples, if necessary? I mean, if
22 you're trenching and you see something.

23 BURIL: I think that's sometimes reasonable.

24 ROBLES: That's reasonable. If we find
25 discolored soil or something else.

1 BURIL: If we find green soil that stinks of
2 hydrocarbons, we're not going to turn our back on
3 it.

4 ROBLES: We're not going to say, "Sorry, Penny,
5 don't look at this."

6 NAKASHIMA: To go to the trouble of digging a
7 trench and then just taking one sample and going
8 away, it seems like that's going to a lot of effort.

9 BURIL: If we actually found something that gave
10 us reason to think there was a problem, then we
11 would pursue it.

12 ROBLES: Sure.

13 BURIL: That's only reasonable.

14 MELCHIOR: So to clarify that, we should
15 probably restate our position for the agencies.

16 ROBLES: Go ahead.

17 MELCHIOR: To have provision to collect an
18 additional sample, if appropriate.

19 ROBLES: If warranted.

20 BURIL: If field conditions indicate a need, we
21 would be prepared to take an additional sample of
22 that particular area.

23 ROBLES: Yes. I think that would be reasonable.

24 BURIL: All right, then. It sounds like we have
25 agreement on number 4, with the caveat that we just

1 mentioned.

2 BISHOP: It's 3.

3 BURIL: Excuse me. Number 3.

4 Number 4. Yes. We plan to scan with an
5 OVA or PID. I think that's a good idea.

6 As far as the analytical protocols, I
7 think that given the fact that we have that ability
8 to see what's there, it makes sense that we would
9 limit the samples that we would analyze for VOCs
10 based on that PID, although if we're taking only a
11 limited number of samples --

12 BISHOP: If you're only taking one per pit, I
13 think you could go ahead and use the PID while
14 you're there, but you're going to have those
15 analyzed.

16 ROBLES: Right.

17 BISHOP: You're not going to take one sample,
18 then use the OVA and decide if you're going to
19 analyze it or not.

20 BURIL: I think that's reasonable. Do you
21 agree, Pete?

22 ROBLES: Yes.

23 BURIL: Just analyze the things for VOCs. I
24 think that's probably a better approach.

25 Under TPH, there's a concern that we have,

1 obviously, about what the source might be of any TPH
2 that we might find and what you folks would deem as
3 a potential concern and how you would handle that.
4 If you could give us some feedback on that, that
5 would be very helpful to us.

6 NAKASHIMA: How about semi-volatiles? Is there
7 a concern? Some of the groundwater data shows
8 semi-volatile results.

9 MELCHIOR: Mainly the phthalates. Caffeine.

10 BURIL: I couldn't believe that.

11 NAKASHIMA: You found caffeine?

12 BURIL: We found caffeine in the water or the
13 soils or somewhere. I can't remember where it was.

14 NAKASHIMA: Was someone making a compost pile
15 using the coffee grounds?

16 ROBLES: That's a good point.

17 BURIL: It could be.

18 LOWE: I think it's fairly common that caffeine
19 shows up as a tentatively identified compound, but
20 when you go through the validation, it drops out.

21 BURIL: Really. I wasn't aware of that.

22 ROBLES: So is that okay with you? Do you have
23 any concerns or any issues?

24 BURIL: So we would propose, then, to sample for
25 the VOCs, go ahead and analyze all samples.

1 But then as far as the TPH goes, I'm
2 pretty certain that Pete is of the opinion there's
3 really no need at this juncture, particularly given
4 that we wouldn't know what to do with it even if we
5 found it.

6 NAKASHIMA: With the other soil samples that you
7 analyzed from the OU-2, did you analyze those for
8 the semi-volatiles?

9 RANDOLPH: Everything.

10 BURIL: Yes.

11 NAKASHIMA: Everything.

12 BURIL: Do you have a problem with analyzing for
13 semi-VOAs?

14 ROBLES: Is that a concern? I don't have a
15 problem with it.

16 BURIL: I think that's a reasonable approach.
17 Take the samples we take from the trenches to
18 analyze for VOAs and semi-VOAs, call it done.

19 ROBLES: Sure. I have no problem with that.

20 BURIL: And the metals, too, of course. Didn't
21 we identify metals as a --

22 RANDOLPH: No.

23 BURIL: Oh, I thought we did.

24 ROBLES: Let's do semi-volatiles. Okay?

25 BURIL: Would that address your concern?

1 NAKASHIMA: Yes.

2 BURIL: Great. Then are we agreed on number 4,
3 that VOAs and semi-VOA?

4 NIOU: Plus SOVOCs.

5 BURIL: Yes. VOAs, semi-VOAs. And we don't
6 analyze for the TPH.

7 NAKASHIMA: This is in all the areas where the
8 discharges are that you're taking these samples from
9 the trenches?

10 RANDOLPH: Yes.

11 NAKASHIMA: Maybe the one metal that we may need
12 to analyze for is the hex chrome or for the chromium
13 because of the discharge of the chromium waste from
14 the cooling towers.

15 RANDOLPH: We were going to cover that with the
16 soil borings. We will be analyzing for hex chrome
17 in the area where it was initially observed.

18 BURIL: Is there any reason why we wouldn't want
19 to do it?

20 NAKASHIMA: So these trenches are not in the
21 same area, then?

22 RANDOLPH: It's too far downstream. We have no
23 idea exactly where that effluent went from the
24 discharge area back in the late 1950s. We know it
25 was in the general direction as to where the outfall

1 is today, but it could have been even farther south.

2 BURIL: I think if we're talking about just a
3 few samples out of these trenches that the
4 additional expense of chromium to address Penny's
5 concern is not an issue.

6 ROBLES: I don't see a problem.

7 BURIL: We can add chromium to that.

8 ROBLES: We can add chrome to that. It's not a
9 big deal.

10 NAKASHIMA: Or you can show us where you're
11 going to put the trenches in.

12 BURIL: Did we already provide that information?

13 NAKASHIMA: Did you provide that to us already?

14 RANDOLPH: I believe it's on the very last
15 figure in your package, if you have it.

16 NAKASHIMA: We have it. I'm sorry.

17 NIOU: Yes.

18 ROBLES: You have one north of the parking lot,
19 out there.

20 BURIL: Which is the area of the discharge.
21 Then the one up on top there as well.

22 ROBLES: Right.

23 BURIL: So are we agreed, then? VOAs,
24 semi-volatiles, hex chrome.

25 MELCHIOR: No. Regular chrome.

1 BURIL: Hex, or regular? Wait a minute.

2 RANDOLPH: We have to do both.

3 NAKASHIMA: See, the one thing with the
4 California regulations is that if you just --

5 BURIL: If you analyze for one you have to
6 assume it's hex.

7 NAKASHIMA: -- analyze for chromium you have to
8 assume it's hex chrome. So it's better to do both.

9 BURIL: We're not talking major expense here.
10 Let's go ahead and do both.

11 ROBLES: Yes. Okay.

12 BURIL: That's fine. Sure.

13 Then number 5 I think we already
14 addressed.

15 RANDOLPH: Just to clarify 4 for my benefit.
16 I'm kind of slow today. We're doing, volatiles,
17 semi-volatiles, chrome and hex chrome.

18 BURIL: Correct.

19 ROBLES: Correct.

20 RICHARDS: And everything in trenches and soil
21 borings?

22 MELCHIOR: No. Just the pits.

23 BURIL: No. Just the trenches.

24 RANDOLPH: We're just talking about trenches
25 now.

1 BISHOP: Then there's that one boring that you
2 had talked about that you're going to do the hex
3 chrome.

4 BURIL: At the end of the discharge area.

5 RANDOLPH: All soil samples that come out of
6 these other three borings that have been proposed
7 follow the same suite of analyses that we did for
8 the original 24 in the RI.

9 BURIL: Okay. The long-term monitoring program,
10 then. This is just kind of a fleshing out of what
11 we had initially discussed.

12 Do you folks have any comment, concerns
13 regarding what you've seen in our approach to it?

14 LOWE: Yes. I had one minor comment. The EPA
15 method 524.2, it's a drinking water method. If
16 there's interferences it doesn't handle that very
17 well. So the chemists back at my office recommended
18 that if you're using 524.2 for groundwater that you
19 make sure you're doing a matrix spike duplicate, if
20 that makes sense.

21 BURIL: Yes. That makes sense.

22 MELCHIOR: That makes sense. No problem.

23 ROBLES: We'll annotate that.

24 BURIL: Matrix spike we can do.

25 So with that QA aspect identified, then,

1 does that address your concerns as far as the
2 monitoring program proposal?

3 LOWE: Yes.

4 NAKASHIMA: I have one thing.

5 BURIL: Okay.

6 NAKASHIMA: You have in here the reduction in
7 the frequency of sampling. Now, is there a
8 provision for the opposite, to increase when you
9 come across a problem?

10 BURIL: I thought we had that in there, but
11 maybe it's not clear.

12 CUTLER: It's been a while since I read the
13 letter.

14 Annually we would go back to everything
15 and I think sample everything annually, I believe is
16 how we covered that. And if at that time we found
17 something pop up in a screen unanticipated, that
18 would be added to the system.

19 BISHOP: I guess I read it under the sampling
20 frequency, that we evaluate the frequency for the
21 wells annually for all of them and at that point it
22 may go up or down depending on what --

23 BURIL: On the site.

24 BISHOP: That's the way I read it.

25 BURIL: That's exactly what the intent was.

1 NIOU: I think it's the last paragraph of your
2 sampling frequency.

3 MELCHIOR: Page 9.

4 NIOU: Page 9, the fourth paragraph.

5 ROBLES: "At least once a year a report shall be
6 prepared evaluating the effectiveness of the
7 monitoring system and proposing any adjustment to
8 the system, if required. If the agencies agree to
9 the proposed changes they will be implemented before
10 the subsequent sampling event."

11 BURIL: In other words, if you go up or down, we
12 adjust as required.

13 BISHOP: Yes. That's the way I read it.

14 BURIL: Does that address your concern, Penny?

15 NAKASHIMA: Okay.

16 BURIL: So in terms of the monitoring program,
17 then, are we all in agreement with Debbie's
18 indication of the matrix spike and spike dup for
19 524.2? Are we in agreement that this is what we
20 want to implement?

21 BISHOP: Let me make sure that I'm clear on it
22 as I read it. We're going to do one year quarterly
23 sampling for all zones and all wells for 524 and --
24 I'm sorry. I forgot what the other --

25 CUTLER: Chromium and hex chrome.

1 BURIL: Chromium and hex chrome.

2 BISHOP: At the end of the first year, we'll put
3 together this report and look at what it says and
4 say this is our --

5 BURIL: Now we'll back off on this one, this one
6 we stay the same, this one --

7 ROBLES: We may have to increase.

8 BISHOP: As I understand, you'll be doing also
9 quarterly summaries of the data throughout the year.

10 Is that correct?

11 CUTLER: There will be a report after each
12 event.

13 BURIL: You'll be receiving a summarization of
14 the data.

15 ROBLES: It will be a data dump.

16 BURIL: It won't really be a lot of
17 interpretation, but it will be essentially a data
18 dump. The annual report would be an evaluation.

19 BISHOP: Those are the two issues. I don't mean
20 an evaluation is required. I would like to be able
21 to see the data.

22 ROBLES: Right.

23 BURIL: Sure. Then the evaluation on an annual
24 basis is so we can base a decision as to whether or
25 not we need to adjust the monitoring program.

1 CUTLER: I believe that we actually proposed
2 every quarter to throw in water level maps.

3 RICHARDS: Not the analytical data.

4 CUTLER: So we can actually --

5 BISHOP: Yes. Analytical results, water level
6 data, a brief discussion, interpretation.

7 Maps would be included showing groundwater
8 elevation, contours and contaminant concentrations.

9 NIOU: Yes.

10 BURIL: I think that's kind of easy to provide
11 you anyway.

12 LOWE: So in each quarterly report would you
13 have one water level map, or would you do one per
14 month?

15 MELCHIOR: At the time of sampling.

16 BURIL: I think it would probably be at the time
17 of sampling.

18 BURIL: We have more data available if there's
19 an issue there that we identify we may need some
20 more understanding, because we only take the
21 multi-port wells at the time of sampling. So that
22 would be the point where we provide the data for the
23 whole monitoring program.

24 ROBLES: I've been thinking about this with this
25 long-term monitoring. Once we get into this phase,

1 we may need meetings just focusing on the monitoring
2 in the sense of sitting down and stating our
3 interpretation and what do we all come with a
4 consensus of what's happening, and if there's any
5 concern. Because I think data is data, but how we
6 interpret it is going to be very important to the
7 final outcome of this process.

8 But I don't like to make an evaluation in
9 a vacuum. We like to do that, but we'd like your
10 comments on it, too, to determine. I've been in
11 some places where the issue is not the chemical
12 contamination, but it is the water levels, finding
13 out where the water is coming from and which
14 direction the water is going to. That's probably
15 more important than anything. The hydrogeology, the
16 dynamics of that site is much more important than
17 the contamination at that site. At a certain point
18 we'll settle what the contamination levels are.
19 It's where and how is the water going. And that's
20 very tricky here.

21 I think that is going to be the biggest
22 challenge in our decisionmaking process; which way
23 it flows. We're going through different events, dry
24 seasons, wet seasons, floods, droughts. All this
25 has a dynamic impact on what's happening. So we may

1 need to have to go back and just maybe take more
2 water levels, not as much as samples, but maybe more
3 water levels. That may come out as a discussion
4 point.

5 BISHOP: I agree with you. A lot of places do
6 monthly water level samples to try just that issue
7 even with quarterly sampling. I know you guys have
8 much more than that because you've got the
9 transducers.

10 BURIL: We've got the transducers.

11 BISHOP: So you're doing it all the time. But
12 yes, I think that's what Debbie was trying to get at
13 a little earlier. I think we all agree that once
14 you get a handle on what your contaminant level is,
15 then you start trying to figure out what's happening
16 with it.

17 BURIL: Sure.

18 BISHOP: I think this might relate to something
19 Debbie had mentioned to me earlier, was having
20 conference calls --

21 ROBLES: Periodically.

22 BISHOP: -- periodically.

23 BURIL: Maybe in between the RPM meetings, kind
24 of keep up on things. Sure.

25 ROBLES: And faxing you or shipping to you

1 information so we can sit down and discuss and
2 figure out what we need to do.

3 BURIL: Sure. That's no problem.

4 ROBLES: I really think that's something we all
5 have to come to a consensus, what is actually
6 happening here. I think everything now is an
7 assertion, as summation of what's going on. We're
8 arguing our position, but there's no data to support
9 either way. I'm more concerned about the
10 hydrogeology.

11 I believe it's going to be so complex that
12 regardless of the legal issues, the feasibility
13 study is going to be very complex. It may be
14 something we have to sit down and work out together.
15 Because I don't know how to tackle it. This is the
16 most dynamic Superfund site I've ever been involved
17 in.

18 BURIL: Mark, correct me if I'm wrong, but I
19 think the one thing that this doesn't address is the
20 due dates for the reports as far as when we would
21 submit them to the agencies for a given quarter.

22 CUTLER: Right. Well, actually, Vince brought
23 it up. This is something we had talked about
24 before, about data validation.

25 In our proposal we're going to collect

1 level 4 data in case we want it validated. But
2 there had also been an issue, does data need to be
3 validated before a quarterly report. That could add
4 another sometimes four weeks to this.

5 To do a sampling event, there's the
6 equivalent of 71 screens out there. It's going to
7 take about five weeks to get all the samples.

8 ROBLES: Five to six weeks.

9 CUTLER: Five to six weeks. And then it's going
10 to take, after that to get level 4 data packages
11 from the last sample collected, maybe another five
12 weeks after that. Then you add like another month
13 of data validation. Then we've got to prepare a
14 report, internal review. We have NASA review, JPL
15 review.

16 BURIL: So there's 16, 20 weeks.

17 CUTLER: You're going to start overlapping.
18 Then your next sampling event has to start.

19 So what we've proposed in here is we just
20 collect the level 4 data packages, and if we see
21 like an odd hex chrome or a caffeine show up or
22 something, we go back and validate that particular
23 result and not build that into our long-term
24 monitoring because it's going to kill us on the
25 schedule.

1 So that's what is proposed here. To me
2 it's just one unresolved issue.

3 LOWE: One question I have isn't stated in the
4 issue of the risk assessment. Is your data
5 validation consistent with what the risk assessment
6 needs?

7 CUTLER: The risk assessment, the plan now was
8 to use the data collected during the RI. The
9 long-term monitoring data wouldn't be part of that
10 because we have to take a cut-off somewhere so we
11 can start the risk assessment.

12 ROBLES: Can I make a recommendation, is that
13 for risk assessment issues we're going to need
14 validated data. It may be that we have the final
15 report, annual report. We need validated data. We
16 need to validate it --

17 CUTLER: No. There's no question about that.
18 We're going to validate it. But I think you were
19 asking is the quarterly monitoring data going to be
20 used in the risk assessment.

21 NIOU: Yes.

22 CUTLER: That's going to just go on who knows
23 how long.

24 BURIL: I would say at this point in time, and
25 correct me if I'm wrong, our plan is that the risk

1 assessment for OU-1 would be based upon the
2 information that we have currently in addition to at
3 least one round of samples from the new wells which
4 we intend to install, if we come to agreement, as
5 soon as we physically can.

6 In Operable Unit 2 we are looking at
7 taking the risk assessment from the data which we
8 have already and additional data from the additional
9 work that we have yet to talk about.

10 In Operable Unit 3, we're kind of in a
11 quandary as to how to deal with Operable Unit 3's
12 risk assessment given the fact that we aren't sure
13 about the viability of tying OU-3 to OU-1 as a
14 result of what we find at Well 10. So we're kind of
15 wondering how we're going to deal with that right
16 now.

17 BISHOP: I think that we might have a --

18 ROBLES: My belief is we're going to validate
19 all the data. But for the report --

20 MELCHIOR: Annual report.

21 ROBLES: -- the annual report, that's the key to
22 try to get.

23 CUTLER: We've also been validating just 10
24 percent of the data packages. See, the first RI
25 event is 100 percent of the data. The second RI

1 event is 10 percent. The proposal in, I believe
2 it's in the FSAP, was every round after that 10
3 percent as a continuing check on analytical, the
4 laboratory.

5 BURIL: That's right.

6 CUTLER: Data above MCLs will be validated, as
7 well as a few nondetects being in there as part of
8 that 10 percent. We could change that if we want to
9 add more.

10 BISHOP: I think the issue is that by waiting
11 for the validation for the quarterly report you put
12 the quarterly report so far down that you're in -- I
13 don't think we need to have validated data for our
14 quarterly submittal because we're just trying to
15 get --

16 BURIL: A feel for what's going on.

17 MELCHIOR: Get the big picture.

18 BISHOP: I agree when you have the annual report
19 where you're making decisions on which wells and
20 which screens to include or not include or change a
21 frequency on, you want to have the validated data at
22 that point to make sure you don't have any --

23 BURIL: So in other words, we could report the
24 data for a quarterly event without it having been
25 validated prior to its submission, but at the point

1 in time that we have the annual report made
2 available where we make decisions, those previous
3 quarters would then need to have the validated data
4 available so we make rational decisions based on
5 good data.

6 BISHOP: Right.

7 CUTLER: And the first quarter after the first
8 year, that quarterly event may show up before all
9 that gets done.

10 BISHOP: Right. And that's fine. It may be
11 what will have to happen when you get to the
12 realities of it is your yearly quarterly actually is
13 offset one quarter because of just the validation
14 issue.

15 I don't know how else we can deal with it.

16 CUTLER: So we understand.

17 NIOU: For other sites I've been working, most
18 groundwater quarterly -- not quarterly, just
19 monitoring the data level is only level 3; only
20 level 3. But of course, the first one always tied
21 up with the RI. Therefore, the first year they
22 attempt to use level 4, but later on I see mostly
23 level 3.

24 ROBLES: No. We're using level 4.

25 MELCHIOR: Right.

1 CUTLER: We're planning on getting level 4 data.

2 BURIL: We won't validate everything at level 4,
3 but we'll have the data available to you if you see
4 the need.

5 ROBLES: Federal agencies went to EPA
6 headquarters and asked about that because it used to
7 be the State was only doing level 2 and 3 only.
8 Then we got into this issue at some off-site State
9 Superfund that was also a Fed Superfund site. And
10 it was agreed to go to level 4.

11 NIOU: Fine with me.

12 BURIL: So then with the caveats that we've
13 identified here thus far in terms of reporting and
14 QA as far as the matrix spike dups.

15 So then as far as the due date for the
16 quarterly reports themselves, then, to simply
17 provide, quote, a data dump, we're looking at what,
18 Mark? About 16 weeks?

19 CUTLER: I have to look at the schedule. It's a
20 long time.

21 BURIL: I know. They're going to be coming
22 out --

23 CUTLER: They start overlapping.

24 BURIL: -- a quarter and a half past the last
25 quarter.

1 BISHOP: Wait. I thought when you're not doing
2 the validation we're going to take off five weeks.

3 BURIL: That's what I'm trying to remember. I'm
4 not sure. It may shorten it by a month. You're
5 right.

6 BISHOP: I think that's what I heard.

7 LOWE: Can we make it very clear in the
8 quarterly reports that it's unvalidated data?

9 BURIL: Absolutely.

10 ROBLES: Absolutely.

11 LOWE: On the first page.

12 MELCHIOR: And on every page.

13 BISHOP: "Draft."

14 BURIL: Big disclaimer on the front.

15 ROBLES: You have to have it. Yes. Yes. It's
16 just unvalidated data all the way across, because
17 that is a real nitpicking thing because if you have
18 somebody out there in the public with a smart lawyer
19 and that caveat is not down there, you just opened
20 yourself up for some legal action.

21 BISHOP: This actually just brought up something
22 that has kind of been going on at our Board. We are
23 going to be switching to asking everyone for data
24 electronically, in the future. We don't have the
25 date yet, but I'm working with them now. It should

1 be probably going into effect in maybe October or
2 December.

3 BURIL: Do you have a format and that type of
4 thing?

5 BISHOP: I will be getting that to you guys. We
6 don't have it quite yet. I hadn't thought about it
7 in the context of this site before. But it's going
8 to be --

9 BURIL: That's fine. Actually, we get
10 electronic data from the labs as it stands right
11 now. We could just tell the lab what it is you
12 need. We could get it for you.

13 BISHOP: So I'll get that stuff to you as soon
14 as we know. It probably won't be until June or July
15 that we'll get any information. You'll probably
16 want to wait on the electronic until you actually
17 have validated data at that point because it will be
18 going into the regional database.

19 ROBLES: Just as a sideline, has the State
20 finally decided on what the method of risk
21 assessment methodology will be? There was
22 discussion about three years ago about different
23 risk assessments from different agencies requiring
24 different things. Somebody was working up a
25 standard. They hired a bigshot, somebody from back

1 east, to consolidate all of this issue.

2 NAKASHIMA: We've always worked with EPA on the
3 risk assessment.

4 ROBLES: But different programs in the State,
5 the Water Board and the DTSC had different risk
6 assessment criteria and they didn't match. So
7 somebody was trying to reconcile this across the
8 board in the State of California. I remember we
9 were at a briefing two years ago in Sacramento and
10 the State came in and said "We hired this bigshot to
11 put it all together so we can have standardization
12 across the board in how data would be taken for risk
13 assessments." I'm concerned on how far the State
14 and EPA has gotten on that issue.

15 BISHOP: I don't know if that's true -- it
16 probably is different at different regional boards.
17 At our board we usually rely on DTSC and EPA's
18 toxicologists that do risk assessment stuff. We try
19 not to get involved in that because we just don't
20 have that background. But that may be different at
21 different regional boards. That's what our policy
22 is at the Regional Board. I mean we'll sit in and
23 listen, but we don't have risk assessment experts at
24 the Regional Board. We don't do that directly.

25 ROBLES: Could you find out from your agency

1 what they're doing about that? I mean, it's still
2 in the back of my mind because there was a lot of
3 discussion on how the data was going to be
4 collected, how it was going to be used, the kind of
5 QA levels needed, and so on. I mean the actual nuts
6 and bolts of how to do a risk assessment were really
7 controversial at this meeting that we went to in
8 Region 9 about a couple years ago. Like I said,
9 there was this one workshop on just risk assessment.
10 A guy from Sacramento came over from DTSC and said
11 this is our great plan on how we're going to
12 standardize this whole issue. Because the question
13 that came to mind is you handle air risk standards
14 that the Air Board was pushing when they didn't
15 match with DTSC standards. It was causing a lot of
16 conflict because we were duplicating a lot of the
17 effort.

18 So if you could just find out. It sounds
19 to me like nothing has been done. The look on your
20 faces puzzles me.

21 What I'm saying is that you need to find
22 out, because if we start risk assessment, we want to
23 make sure we all agree on the standards.

24 BURIL: Let me step backwards. Mark, do you
25 remember the timing that we were talking about on

1 the reporting?

2 CUTLER: Yes. We estimated 60 days by the time
3 we started, this is workdays, to when we started
4 sampling where we would have level 4 data packages
5 back. Then from that point I think we gave
6 ourselves a couple weeks to write a report. So 10,
7 12 weeks, about 14 weeks. But if we can just base
8 it on a preliminary report or level 3 reports from a
9 laboratory, we could knock off at least three weeks,
10 maybe, off of that.

11 BURIL: Maybe rather than setting concrete
12 deadlines, I think it would be good to see how well
13 this thing comes together in terms of the timing,
14 and so fourth. But we would shoot as a goal at this
15 point by having a quarterly report available to the
16 agencies for the previous quarter at the next
17 quarterly event. In other words, quarter 1's report
18 would be to you folks hopefully by the time quarter
19 2's sampling would start.

20 CUTLER: Right. I think it's 13 weeks is a
21 quarter.

22 BURIL: More or less.

23 CUTLER: And it's going to take us maybe about
24 six of that just to sample.

25 BURIL: Right.

1 CUTLER: You figure another two to three to get
2 even our level 3 packages. So we're up to nine
3 weeks. And two weeks to write a report. We're up
4 to 11 weeks.

5 BURIL: A couple weeks to turn it around fast.

6 CUTLER: Then we start our next event. So it's
7 going to be --

8 MELCHIOR: Staggered.

9 BURIL: It's going to be a little bit staggered.

10 CUTLER: For the first year until things start
11 dropping out. Now, this is doing everything.

12 BISHOP: I don't want to be contentious, but it
13 sounds like really we're talking about, instead of
14 four quarters, doing five quarters of everything
15 because --

16 BURIL: I see what you're saying.

17 BISHOP: There wouldn't be any way for anyone to
18 look at that year's worth of data.

19 BURIL: Until it comes out in the fifth quarter.

20 BISHOP: Right. I was trying to think of how we
21 could stagger it so that would work. I can't.

22 BURIL: You can't. I think we might as well
23 just bite the bullet. I think you're right, Jon.

24 ROBLES: I think we just need to do it because
25 there is no other way.

1 BISHOP: I don't want to force you to do that,
2 but I can't think of any way not to.

3 BURIL: Your point is well made.

4 ROBLES: The technology is not there to go any
5 faster.

6 BISHOP: Right.

7 BURIL: If we could come up with a good way to
8 sample wells quicker, that would be great.

9 CUTLER: Nondetects for years. We're still
10 going to be nondetect. Those will stop. Our
11 sampling time is going to cut in half.

12 BURIL: After that, things will speed up and we
13 can do it on a more annual basis.

14 BISHOP: Right.

15 BURIL: That's a good point.

16 CUTLER: Unless you'll accept years of previous
17 data.

18 BISHOP: I think what we really want to do is
19 have four quarters of consecutive.

20 BURIL: I agree.

21 ROBLES: Let's shoot for five, then.

22 BURIL: We'll shoot for five quarters of
23 everything and then on the basis of the information
24 available to us at the end of the fourth quarter,
25 available in the fifth quarter, then we figure out

1 where we go.

2 LOWE: Is that using one sample?

3 CUTLER: Well, the thing that takes a lot of
4 time with the West Bay, there's going to be, what is
5 it, at least 10 West Bay wells out there. The West
6 Bay sampling equipment I think JPL spent about
7 50,000, 40-, \$50,000 for one set. So that we have
8 to do one screen at a time, go on site, then off
9 site. We can double up. Part of the plan is to
10 have another crew do the shallow wells. There's
11 like 10, 13 shallow wells. So we'll double up. But
12 the time restraint is just --

13 BURIL: The multi-ports just take forever.
14 It's, what, a day and a half each or more?

15 LOWE: Each screen or each well?

16 RICHARDS: Not with this reduced.

17 CUTLER: Not with this reduced. Right now it's
18 a day per screen. We should probably finish a well
19 probably in about three days, or two and a half days
20 now. Probably cut it in about half with this level
21 of sampling.

22 MELCHIOR: Analytical requirements.

23 CUTLER: Right. And all the QA/QC stuff you go
24 through.

25 BURIL: The amount of samples you have to get

1 out of the ground.

2 CUTLER: Right.

3 BURIL: So that will be our goal, then, as far
4 as timing of the reports, would be to shoot for
5 having it available at the next quarterly sampling
6 event.

7 Why don't we take a break for lunch. It's
8 about noon, and then we can move on.

9 ROBLES: Why don't we just finish this.

10 MELCHIOR: We'll be done with item 1.

11 BURIL: I'm sorry.

12 ROBLES: We're on the last stage. We've talked
13 about reports. The only thing is additional vadose
14 zone assessment.

15 LOWE: Before we move off the long-term
16 groundwater monitoring, one more thing that I wanted
17 to say is to encourage JPL to give their labs PE
18 samples. I don't know if that's something that you
19 would routinely do. But that's how we found all the
20 problems with Eureka. I think it's a good way to
21 make sure your lab is --

22 BURIL: Can you elaborate on that just a little
23 bit, because I'm not familiar with the Eureka.

24 LOWE: We had sent them some performance
25 evaluation samples. Are you familiar with what

1 those are?

2 BURIL: Yes.

3 LOWE: They performed badly on that. And then
4 we went in and raided their lab and realized that
5 they were not running a lot of samples. It was
6 criminal fraud. Several of the people high up in
7 that lab were arrested and are serving prison terms.
8 They were backdating things. Things were out of
9 calibration. They weren't rerunning them.

10 BURIL: I've had not criminal, but I've had
11 something similar happen to me as well. Your point
12 is well made.

13 ROBLES: You're spending hundreds of thousands
14 of dollars down the drain if you have a crooked lab.

15 BURIL: They were pulling numbers out of the air
16 based on historical information.

17 LOWE: Right.

18 ROBLES: They were blowing holding times and not
19 keeping their stuff because it was just too much of
20 an effort to keep it.

21 BURIL: I had a lab that took what they
22 historically knew to be approximately the right
23 concentration, just kind of filled in the blank and
24 sent it out.

25 LOWE: Right.

1 BURIL: That's a good idea, Debbie. We'll
2 certainly take that into consideration.

3 Do we want to finish off with the
4 additional vadose zone, then, before lunch?

5 ROBLES: Yes.

6 BURIL: All right. I think we've laid that out
7 in enough detail for you to at least have a concept
8 of what it is we're talking about. I think, again,
9 the best thing that we can do at this point is to
10 hear any questions or comments or concerns that you
11 may have and try to address those.

12 BISHOP: I have a couple things that struck me,
13 so I'll jump in first.

14 As I remember finding out here, you're
15 planning to do sonic drilling technique, which
16 compresses, essentially, the formation and it moves
17 everything out. Right? That's the way that I
18 interpreted it. I've never used it.

19 CUTLER: To some extent.

20 RANDOLPH: To some extent. All it does is kind
21 of push it out of the way just a little bit so you
22 don't have the cuttings, but you have a core.

23 CUTLER: You're taking cuttings out. It's not
24 the hole. The diameter is being pushed just a
25 little.

1 BISHOP: So just a little bit of it is being
2 pushed. How much does it compress? Are you going
3 to be able to pull a vacuum on it?

4 RANDOLPH: Yes. Definitely.

5 BISHOP: That was one of my concerns, was how
6 much was it tightening it up, what's it going to
7 interfere with your --

8 CUTLER: That's adjacent to the dry case.
9 You'll pull vacuum on the stuff after you set the
10 well.

11 BISHOP: Yes. After you set the well, have you
12 compressed it enough that --

13 RANDOLPH: The experience with this, and Azusa
14 is the closest place I can think of right now where
15 this one company has just finished installing
16 several of them to a depth of 100 feet with no
17 problems whatsoever, and they were also doing quite
18 a few of them up in the Sacramento area before the
19 rig came down here.

20 BISHOP: I hadn't used it. When I read it --

21 RANDOLPH: We're using that rig right now quite
22 a little bit for installing relatively shallow
23 standpipe monitoring wells where we need to see very
24 small, thin thicknesses of aquifers or aquiclude
25 type materials and being able to put a screen in to

1 a relative position within six inches that we know
2 where we're at because we have the core.

3 BISHOP: Because you get a continuous core.

4 RANDOLPH: It's a relatively new technique to
5 the Southern California scene, although they have
6 been using it quite a little bit up north and back
7 east. These rigs are now being made available to
8 the community or business out here.

9 BURIL: B.G., one question I have for you,
10 though, regarding the drilling technique. I have
11 heard through the grapevine, so to speak, that this
12 particular drilling technique sometimes has quite a
13 bit of trouble penetrating large rock.

14 RANDOLPH: They have been penetrating large rock
15 at other locations. I don't know if hard rock here
16 at JPL is any harder than anyplace else, or any
17 bigger boulders. But they have been successful.
18 One drilling company says very definitely yes. The
19 other one says maybe. We're still dickering with
20 this in our own minds at this point in time. That
21 would be the preferred method because it cuts down
22 two months out of the schedule, at least two months.

23 If we have to use dual wall air
24 percussion, we extend the schedule. We're looking
25 at trying to compress the due date times.

1 BURIL: Right. Understood.

2 RANDOLPH: So that's the reason we're looking at
3 it. We're looking at it very hard.

4 BISHOP: They do it in Azusa?

5 RANDOLPH: Yes.

6 BISHOP: That's a very bouldery formation.

7 RANDOLPH: Yes, it is.

8 BISHOP: It's usually very hard to get stuff in.

9 RANDOLPH: Right. Right.

10 BISHOP: That's a good indication.

11 The other is, the way I read it, you're
12 going to have this core, but you're not going to
13 retain any samples for soil sampling of that? I'm
14 not necessarily saying that you need to, but you
15 might think about it. If you've got an area that
16 you get real hot on the vapor, do you want to have
17 some correlation to the soil samples? There's
18 always a question on the use of that, usability
19 function. But this is going to produce essentially
20 a continuous core? Is that the way it works?

21 RANDOLPH: Yes, it is.

22 BISHOP: You may want to save some of the
23 samples.

24 BURIL: I guess the only concern that I would
25 see as an immediate problem would be holding times

1 for the samples.

2 BISHOP: Right. Definitely you're not going to
3 have much leeway there. But your vapor is going to
4 come off in a couple days.

5 BURIL: You'll know fast.

6 BISHOP: Yes. You're going to know pretty
7 quick.

8 I don't know. I'm not necessarily saying
9 you have to do it. I think you might want to think
10 about it, though.

11 BURIL: That's something we could take under
12 advisement and look at it.

13 ROBLES: We'll take a look at that and see.

14 BURIL: That's a reasonable suggestion.

15 ROBLES: Any other questions on that?

16 BISHOP: The only other thing is, we talked
17 about it when we were out looking at the locations,
18 is you have a tradeoff what you're doing by having
19 them so far apart for soil vapor.

20 BURIL: Right.

21 BISHOP: What does it mean if you get a
22 nondetect that far out at depth? It's a tradeoff,
23 but at least you're going to have an outer bounds.

24 BURIL: I think one of the things, Jon, that
25 we're hopeful, recognizing that's a valid concern,

1 one of the things we're hopeful of is given the
2 nature of the soils we have here, if we do need to
3 implement some form of a vapor remediation system,
4 that we would expect an area of influence under a
5 fairly minimal vacuum to be fairly large. So we
6 would hopefully be able to encompass that whole
7 area. That's our concept at this point. But
8 recognizing your concern, we appreciate you bringing
9 that to our attention. We're hopeful we won't have
10 that problem.

11 BISHOP: We would normally start with a much
12 less distance when you're trying to evaluate the
13 extent of a vapor plume. You don't usually go out
14 200 feet or 150 feet and say that's your first
15 point.

16 But you have access problems and also
17 you're going to a large depth immediately.

18 BURIL: Kind of a tradeoff there.

19 BISHOP: Yes. I understand. There are some
20 tradeoffs.

21 ROBLES: Maybe we need to explain that in the
22 RI.

23 BISHOP: I think you need to rationalize your
24 location either in the RI -- that's probably the
25 best place.

1 ROBLES: Detail of why we did what we're doing.

2 BURIL: Okay. That's very reasonable.

3 Debbie, Penny, any statements?

4 NIOU: You said, 3, you will install soil
5 sampling points at three of your four wells. How
6 about the fourth one?

7 BURIL: Where do you see that?

8 RANDOLPH: Look at bullet number 2 on the next
9 page.

10 NIOU: That one, the fourth one, will only have
11 five soil vapor sampling tips. The other ones will
12 have ten. Is that right?

13 RANDOLPH: Yes.

14 BURIL: Yes. The reason for that is the fourth
15 one is placed right next to Well 16 that already has
16 the ones in place from zero to about 100 feet. So
17 we're just going to do the ones that are below that
18 level.

19 NIOU: Okay.

20 ROBLES: Any other comments?

21 BURIL: Any questions?

22 ROBLES: Any concerns?

23 BURIL: So we have a green light on that as
24 well.

25 ROBLES: We have a green light on it?

1 NIOU: Let's go back to the old question.

2 BURIL: Which was?

3 NIOU: That when I mistake number 3.

4 BURIL: Oh, okay.

5 NIOU: The 50-foot question. You said that the
6 50-foot cuttings will be used for characterizing for
7 soil disposal. Right?

8 BURIL: Yes.

9 NIOU: My question was: If it's close to 16,
10 SVW 16, don't the soils tend to have some
11 contamination?

12 BURIL: I think that was Jon's point as well,
13 not only focusing on the one near 16, but on all
14 four of them. We essentially agree that we need to
15 take possibly a second look at that and decide what
16 it is we should do.

17 NIOU: Yes.

18 BURIL: I think we've already agreed to do that.

19 RANDOLPH: One point I'd like to point out,
20 Stephen, is that if we cannot use sonic we have to
21 use dual wall air percussion. The only sampling
22 that would be viable to us or be of importance would
23 be VOCs, and the drilling method would completely
24 destroy any VOC sampling attempts that we would
25 have. So at this point in time that would be the

1 only thing we would want to sample for or would be
2 meaningful.

3 NIOU: True.

4 RANDOLPH: At this point in time it's very moot.
5 We can take Jon's suggestion into consideration if
6 we do the sonic. If the other, if we have to go
7 dual wall air percussion, forget it.

8 NIOU: Okay.

9 BISHOP: You've blown it all out, anyway.

10 BURIL: All right?

11 NIOU: Yes. It's understandable.

12 BURIL: Great. Any other questions, comments?

13 Then we have consensus to a green light,
14 and I think we should go to lunch.

15 (At the hour of 12:25 P.M. a recess was
16 taken until 1:35 P.M. of the same day.)

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AFTERNOON SESSION

1:35 P.M.

BURIL: It looks like we're ready to pick up on number 2 of the agenda. I think where we're at right now is kind of a crossroads as far as the risk assessment goes. I think that we've got a couple of things here that we're kind of concerned with. They aren't so much how to do it but what we should be including and the timing of different things.

What our concern really stems from is trying to make sure that we generate a risk assessment that has all of the data that's going to be pertinent to determining what it is we have to do in terms of remediation. In that regard, what we're thinking right now is that we want to get something that has at least two rounds of data that are collective in terms of having everything done at one point.

ROBLES: 1 and 3.

BURIL: Right. For Operable Units 1 and 3. So in other words, we want to be able to get all the wells in Operable Unit 1 and Operable Unit 3 completed as a sampling round and then do that again, take that information, generate the RA, risk

1 assessment, and utilize that as the groundwater
2 operable units' risk assessment.

3 For Operable Unit 2 we'd like to be able
4 to have the information that's generated by the four
5 new soil borings that we're planning to put in.

6 ROBLES: Does that make sense?

7 LOWE: So for OU-2 you're not going to wait
8 until the data is collected from the Arroyo also?

9 BURIL: We'll be doing those concurrently.

10 LOWE: So really, you're waiting for this soil
11 data and --

12 BURIL: The stuff from the Arroyo is going to be a
13 fairly short turnaround as far as the actual
14 fieldwork goes. It's going to be very short. The
15 longer term is going to be the actual sampling of
16 the borings. We're talking about doing those at
17 least twice in order to understand what's happening
18 there.

19 So in terms of trying to understand all
20 the different things, then, we would hope that we
21 would have a good data set at that point from which
22 to base a good risk assessment and then move on into
23 the ROD and on into RD and RC.

24 RANDOLPH: Chuck, I'd just like to clarify one
25 thing. You say the four soil borings. Just refer

1 to those as the deep soil vapor wells.

2 BURIL: Correct.

3 RANDOLPH: We have three soil borings down in
4 the parking lot area.

5 BURIL: That's correct. We want to have that
6 information as well.

7 RANDOLPH: Correct.

8 BURIL: But I think because of the nature of
9 what we're finding up there in the area of Soil
10 Vapor Well 16, being the highest concentration of
11 carbon tetrachloride that we found thus far in the
12 vapor state, we definitely want to have those under
13 our belt to know what it is we have to do for
14 Operable Unit 2.

15 LOWE: This brings up an interesting question.
16 How do you plan to incorporate the soil gas data
17 into the risk assessment?

18 BURIL: That's an excellent question, Debbie.
19 Boy, I wish I knew. I have to turn to my
20 consultants and say, well?

21 MELCHIOR: We've stated our opinions on the use
22 of soil vapor data continuously for three years now,
23 that we do not believe that they are sufficiently
24 quantitative to be used in a risk assessment.

25 BURIL: So we don't have a good handle on how

1 that would actually work.

2 Jon, maybe you have some insight on how
3 other sites have done that.

4 LOWE: I think most Superfund sites, when you do
5 your risk assessment they kind of ignore this threat
6 to groundwater. It's something you deal with in
7 trying to establish cleanup levels, but in terms of
8 quantifying your risk to the population, it's really
9 a risk to the groundwater, and then the risk that
10 that poses to people. But there's no direct
11 exposure for deep soil gas.

12 MELCHIOR: That's what I was referring to.

13 LOWE: Okay.

14 MELCHIOR: Now, with respect to a threat to
15 groundwater, we certainly are looking towards the
16 Regional Board being the key proponent of the use of
17 soil vapor to give us some indication of how it
18 intends to review that kind of data. And we can
19 discuss the basis of the data and how you interpret
20 it and factor that into a risk assessment. We're
21 still looking, because we've been looking for this
22 for seven years now.

23 BISHOP: As I said earlier, we kind of usually
24 leave risk assessment to EPA and DTSC in terms of
25 that component. But we do look at the fate of

1 contaminants, are they going to move to the
2 groundwater.

3 The reason that we have become more and
4 more proponents of soil gas is that in a lot of
5 instances we've seen that classic mechanisms for
6 transport through the vadose zone mean that the
7 material could not have reached it since the
8 industrial age. So it couldn't be in the
9 groundwater, but it's there. So you have to step
10 away from saying that because of the low rainfall
11 and the mostly covered areas that this stuff is not
12 being driven by moisture, it's being driven some
13 other way. That seems to be soil gas migration as
14 being the transport mechanism to get the material
15 from the vadose zone to the groundwater in a
16 reasonable time period.

17 So that's why we are such proponents of
18 looking at soil gas, is it seems to be the major
19 mechanism of transport through the system.

20 MELCHIOR: We have used it in the past, really,
21 as a tracer to look at sources as opposed to the
22 reverse; taking it as a quantitative tool to predict
23 concentrations in groundwater, which is really what
24 Debbie is speaking about. And that's the
25 troublesome part. We recognize the use of that

1 technology as a tracer in a qualitative way. It's
2 when you quantitatively take it to predict a
3 groundwater concentration that you have a tough time
4 with that.

5 BISHOP: Right. I agree there is a difficulty
6 in that depending on what assumptions you make about
7 the --

8 MELCHIOR: What the variables are.

9 BISHOP: -- interface there at the capillary
10 fringe you can get, from -- this material will never
11 actually dissolve into the groundwater to --
12 essentially, everything dissolves in the groundwater
13 as it moves up and down. I don't think either of
14 those are probably correct. I think it's somewhere
15 in the middle there.

16 But when you start looking at the
17 magnitude of your vapor component, you can start
18 saying, okay -- the way we do it is I guess you
19 would say more qualitative. If you've got a large
20 vapor plume there of high concentration, that is
21 still a continuing source to the groundwater, in our
22 opinion. That has still got enough there that it
23 may be affecting your groundwater, or we know it is,
24 actually. Continuing to keep your groundwater
25 levels high or adding mass to it, adding

1 concentration.

2 So it's not so much in terms of a risk
3 assessment, which you're going to look at what
4 you've got there now, unless you have some real
5 reason to believe it's going to dramatically
6 increase in the future in terms of level. But you
7 want to say, okay, how can we cut the source off so
8 that it's not going to get any worse and change the
9 risk assessment.

10 ROBLES: Sounds like to me you're talking about
11 two different things.

12 BISHOP: I think so.

13 MELCHIOR: You are.

14 ROBLES: Your case deals with the feasibility of
15 how to clean up sources, and so on. That's what
16 your concerns are, whereas risk base should be:
17 What is the human health risk issue with this site?

18 BISHOP: Right.

19 ROBLES: Soil gas is not --

20 MELCHIOR: It's insufficient quantitatively.

21 ROBLES: So that we're going to not use soil gas
22 for the risk assessment. We're going to need that
23 data for the feasibility.

24 MELCHIOR: Well, again, I'm not convinced of
25 that yet.

1 ROBLES: Okay.

2 MELCHIOR: I still view the soil vapor
3 technology, as we've used it up to this point, as
4 being a tracer tool to identify sources.

5 Now, relating those concentrations in the
6 soil vapor sample that you have to the actual
7 concentration within a surrounding --

8 ROBLES: It's very difficult.

9 MELCHIOR: -- unit area is virtually impossible.

10 BISHOP: Right. I don't think we're necessarily
11 saying you need to relate that to a concentration in
12 the soil matrix or in the groundwater.

13 Where I would differ is that a tracer
14 would, in my mind, would be basis to indication of
15 where to concentrate looking --

16 MELCHIOR: Right.

17 BISHOP: -- for a source, whereas I think I can
18 take it the next step and say, since it's a volatile
19 material, the soil gas is a good measurement in
20 remediation on cleaning it up.

21 So you're not just tracing a past problem,
22 but you're also evaluating --

23 MELCHIOR: Monitoring.

24 BISHOP: -- your performance and your ability to
25 remove the problem. So if you want to call that

1 tracing, then I would agree with you.

2 MELCHIOR: Sure.

3 BISHOP: But I think it has more of a use.

4 NIOU: For some other site, what we do to this
5 case, what Debbie was saying is exactly the way we
6 do it is, we're not really looking at the pathway
7 from deep soil. We are looking at the impact to
8 groundwater.

9 By recording the soil vapor levels,
10 concentration in the soil vapor, the change in the
11 temporal aspect as well as the space, then we build
12 up a model to predict whether the remaining
13 fugitive, say, solvent, will that eventually still
14 moving down or not, first.

15 If it will, then we'll see then the next
16 step is under what concentration it won't move down.
17 And that's the feasibility study, the final PRG,
18 using model, because there's no other way you can
19 deal with this case.

20 ROBLES: That's only feasibility.

21 MELCHIOR: Usually take direct soil samples,
22 analytical results from the direct soil sample as
23 your basis for the modeling. It's the relating of
24 the soil vapor concentration to a, quote, potential
25 source concentration that we have had a very

1 difficult time making that.

2 ROBLES: And then develop the risk assessment
3 out of that.

4 NIOU: No, not risk assessment. It's simply --

5 ROBLES: Feasibility.

6 NIOU: Fate and transport.

7 ROBLES: So the key question again is do we want
8 to use soil vapor for risk assessment. I don't
9 think so.

10 LOWE: I don't believe you need to.

11 BISHOP: No, I don't think so either. The only
12 caveat that I would have is that you may need to
13 evaluate is your groundwater going to increase from
14 what you find in -- if you find extremely high soil
15 vapor near the groundwater, is that going to lead
16 you to believe that your groundwater levels are
17 going to rise in the near future. That would be the
18 caveat.

19 LOWE: I think you want something either in your
20 RI or FS that says we've taken these soil gas
21 measurements, we've determined that these pose a
22 risk to the groundwater, that they'll increase the
23 concentrations and that's why you're taking an
24 action. You can't just find soil gas
25 concentrations, "Oh, well, we're going to clean it

1 up." There needs to be some sort of evaluation --

2 MELCHIOR: Tie-in.

3 LOWE: -- showing the public why you decided
4 this is the source of the groundwater and you need
5 to clean it up.

6 MELCHIOR: That's fair.

7 ROBLES: Fair enough. So we're still back to
8 the risk.

9 LOWE: Going back to OU-2, it sounds like the
10 soil vapor wells are not on the critical path for
11 the risk assessment, then, if we're not going to
12 include that soil vapor in the risk assessment.

13 BURIL: You have raised an interesting point
14 which we had not given thought to.

15 MELCHIOR: No. I didn't even think about it
16 from that angle.

17 BURIL: No, we haven't either. You've got a
18 good point.

19 Let me ask this, then, in trying to
20 understand the process. I think I understood what
21 you said, but in terms of the process overall where
22 remedial actions are typically based upon the risk
23 that's associated with a given concentration of a
24 contaminant in media, if we don't perform a risk
25 assessment on the soil gas, recognizing the

1 difficulties in that, do we then base our reasoning
2 for dealing with soil gas on economics, or what
3 other kind of criteria do we evaluate in that
4 regard?

5 BISHOP: I think what Debbie was saying, the way
6 that we have always kind of based it on is you have
7 a risk associated with a contaminant in the
8 groundwater. What you're basing it on is you know
9 you're going to do that risk assessment based on
10 that groundwater concentration, but you also know
11 that you have the source of material that could then
12 be impacting and increasing that risk or continuing
13 to add to that risk.

14 BURIL: So it's intuitive as opposed to
15 quantitative, though, in large part, then, isn't it?

16 BISHOP: I guess you would have to say that.

17 ROBLES: Intuitive with some technical
18 discussion in the back.

19 BURIL: Right. Right.

20 ROBLES: Some rationale.

21 BURIL: Right.

22 RICHARDS: The State has set up guidelines
23 already in their interim documents, giving you depth
24 to groundwater, concentrations. That's already been
25 established.

1 BISHOP: Right.

2 RICHARDS: The guideline is already out.

3 LOWE: At the Mather Air Force Base, which is
4 the other site that I work on, the feasibility study
5 had three different criteria which could trigger
6 remedial action. One is a threat to human health.
7 That's in the risk assessment.

8 The next is the risk to the ecosystem,
9 which was also in the risk assessment.

10 And the third one was a threat to
11 groundwater, which the risk assessment didn't deal
12 with at all, that that was sufficient reasoning
13 for some remedial action.

14 BURIL: So threat to groundwater being viewed, I
15 would assume, in a more or less subjective approach,
16 as being a high concern as opposed to a low concern
17 at another location, and based upon that evaluation
18 you would then decide at this location that has a
19 high concern we would go ahead and remediate,
20 whereas this location, being low, maybe not.

21 LOWE: I think it all comes back to the modeling
22 that you do that shows the impact that this vadose
23 zone contamination is going to have on your
24 groundwater remediation. If you're going to have a
25 continuing source, then you're never going to be

1 able to remediate groundwater.

2 BURIL: Sure. You're just going to continue to
3 pump and treat forever.

4 LOWE: So your OUs are kind of interrelated.

5 BURIL: They're very much interrelated.

6 ROBLES: This is the first time I've been on a
7 site that an OU is a media. I've always had
8 locations as operable units and you deal with the
9 whole contamination so the risk assessment looks at
10 the whole issue differently. Here each operable
11 unit is a different media, and therefore I'm not
12 comfortable with a risk assessment for each OU.
13 That's why 1 and 3 need to be tied together.
14 Because we're talking about one major location. The
15 hydrogeology is so complex it's got to be dealt with
16 as a total.

17 MELCHIOR: I see everyone shaking their head
18 except for Penny on that. Are you in agreement with
19 tying the risk assessments for OU-1 and OU-3
20 together?

21 NAKASHIMA: I thought that was something that
22 was up to NASA to determine. If you wanted to do it
23 separately or together --

24 BURIL: That's fine.

25 NAKASHIMA: -- that we discussed previously.

1 ROBLES: Because I'm very much concerned that if
2 we try to do risk assessment from each operable unit
3 we may come up with the wrong feasibility and
4 impact. And that's an issue that we have as a
5 concern.

6 BURIL: Of course, we may view a given portion,
7 such as on site, differently than we view out to the
8 east, because while they're in the same aquifer,
9 physically they are separated by a fair amount of
10 distance and we wouldn't want to have to place a
11 remedial action here. The idea is that we'd want it
12 to reach all the way to the edge of the combined
13 operable units, which would be about a mile and a
14 half that way. So that kind of logic I think would
15 have to prevail throughout.

16 ROBLES: Yes. Sounds fair.

17 LOWE: So by putting them together all you're
18 really saying is you want them in the same document.

19 ROBLES: Right.

20 BURIL: Basically.

21 ROBLES: And therefore we can compare. Because
22 when it gets to the issue of what preferred
23 remediation we want to do it has to address, you
24 can't address one operable unit without impacting
25 the other.

1 LOWE: Right.

2 BURIL: Right. Especially when we're talking
3 about here on the site and immediately to the south.
4 That works through whatever way it works.

5 I guess then we're kind of at a point of
6 identifying exactly what data we want to have in
7 this risk assessment in terms of what we have now
8 versus what we were going to collect in the future.

9 I'm going to start with one that we hadn't
10 really thought of, and maybe we need to step back
11 and think a little bit about Operable Unit 2 now in
12 terms of what Debbie has indicated on soil gas.

13 ROBLES: What other data do we have?

14 MELCHIOR: The Arroyo and the soil borings.

15 RANDOLPH: That's basically it.

16 ROBLES: And we also have the Pasadena well.

17 RANDOLPH: No.

18 BURIL: No, no. That wouldn't be part of it.
19 That would be OU-3.

20 RANDOLPH: We have the soil sample data.
21 Basically, there's really nothing there.

22 BURIL: I think that what we're talking about,
23 then, aside from the concerns that may be cropping
24 up in terms of the soil gas data that we generate
25 from those soil vapor wells when they're installed

1 in the four new locations, that we're really talking
2 about the Arroyo, the three additional borings in
3 the lower parking lot down there. Then once we have
4 that sum total of data, we're ready to move out into
5 the risk assessment and beyond. Does that sound
6 right?

7 ROBLES: I think so.

8 MELCHIOR: That's it.

9 ROBLES: It's just like whoosh.

10 BURIL: That streamlined that particular process
11 dramatically by putting aside the soil gas in that
12 fashion. That's not to say we will be able to go to
13 ROD that rapidly, because I think we have another
14 criteria to evaluate in the FS that you identified,
15 and that is threat to groundwater now, which is
16 something that is very real and we need to take a
17 hard look at how we could deal with that particular
18 issue once we have the data from the vapor wells
19 that we plan to construct.

20 MELCHIOR: One of the things I think would be
21 helpful, Chuck, I'll toss this out, would be to
22 start to develop that methodology for evaluating the
23 soil vapor data in light of threat to groundwater.
24 And I might suggest that we set up a separate --

25 ROBLES: Teleconference, meeting; whatever.

1 MELCHIOR: Whatever the case may be, with the
2 Regional Board being somewhat the lead, if you will,
3 to give us their perspective on that.

4 BURIL: I think that would be very helpful,
5 indeed.

6 Jon, I'm sure with the experience you
7 folks have had in dealing with this in so many
8 sites, you could offer us a lot of insight as to how
9 the things were done.

10 BISHOP: As I was just talking about, we
11 actually have a draft guidance that we use for
12 evaluating cleanup.

13 BURIL: Was this the one that Hank was kind of
14 talking about last July?

15 BISHOP: Yes. Exactly. It's actually out. It
16 has been out now for a little while. It's kind of
17 to show people where things are going and how you
18 can use this without spending a lot of money to pay
19 someone to model fate and transport, what kind of
20 impacts you can expect.

21 It is pretty conservative. The trade-off
22 is it is pretty conservative, so when you look at
23 this you may be over --

24 BURIL: Overemphasizing.

25 MELCHIOR: Overemphasizing. Right.

1 BISHOP: Yes. Overtreating, but you're not
2 spending a large amount of money on evaluating the
3 fate and transport.

4 BURIL: But yet if we take that in light of the
5 site-specific considerations as far as, quote, the
6 perceived versus the calculated versus whatever
7 other kinds of risks we can identify to groundwater,
8 we may temper whatever that says in terms of what
9 kind of remediation we might actually need.

10 ROBLES: Could we get that transmittal?

11 BISHOP: Yes.

12 BURIL: I've already got it.

13 ROBLES: You've got it?

14 BURIL: I've got it, but I think it might be
15 modified from what I have. Mine is dated from last
16 July.

17 ROBLES: Why don't we get it from you.

18 BISHOP: I think that might be -- there's
19 another one maybe coming out next July.

20 BURIL: If you could send it to us, though, just
21 to be safe.

22 BISHOP: I'll send you a copy of the most
23 recent. I don't think there's anything
24 significantly different. There may be some language
25 changes.

1 ROBLES: So we can all talk on the same sheet,
2 because I think it's very important that we start
3 developing the methodology.

4 BISHOP: The area that it kind of leads to is
5 how, then you evaluate your effectiveness of your
6 cleanup. You use this kind of to say, do you have a
7 threat to groundwater at all. If you do, yes, then
8 you're going to do the cleanup.

9 Now you're into the next stage, which it
10 doesn't necessarily cover directly because that's
11 more of a method specific. We won't even talk about
12 the ones that won't apply here, like excavation,
13 things like that.

14 BURIL: Right.

15 BISHOP: If you're going to use it for something
16 like, say, soil vapor extraction, then you have to
17 recognize the limitations in soil vapor extraction
18 and be able to say, okay, there is a point where
19 you're no longer actually having any effect on the
20 system. And it does describe that a little bit, but
21 it's not --

22 BURIL: Not succinct.

23 BISHOP: Yes. That is much more specific per
24 site. But at least you'll have it.

25 MELCHIOR: We just need it for the first part

1 right now. We'll worry about the rest of it later.

2 BISHOP: That's what it was mostly designed for,
3 is the first part.

4 BURIL: I'm sure consultants in the area just
5 love you for actually allowing them having some
6 guidance to be able to tell clients, "Yes, you've
7 got this and this may be a problem."

8 BISHOP: Yes or no, because it actually saves --
9 the reason it was developed was because it was
10 costing so much money in development time to do
11 these fate and transports. We're all really coming
12 up with the same type of information.

13 BURIL: I said that very tongue in cheek.

14 It sounds to me like we've got a
15 consensus, then, on Operable Unit 2 for the risk
16 assessment and the timing of that, and that is to
17 incorporate the additional soils work.

18 As far as the feasibility study, then, we
19 would then have to incorporate the soil gas aspects
20 into that, and then the ROD would address all three,
21 both the threat to groundwater and the soils work
22 that generates the RA.

23 Operable Units 1 and 3. Here we have kind
24 of an interesting dichotomy because we do need to
25 look at what we have now, I think, to some degree.

1 The problem that we face, I think, is that we really
2 have a large temporal phasing of the data. We have
3 data down here in OU-1 that the last time it was
4 sampled was in November of last year.

5 CUTLER: '94.

6 BURIL: '94. Yes. We haven't sampled it since.
7 Now, we've got a round of data from OU-3 dated June
8 of last year.

9 Are we still out there, Vince, today
10 collecting samples? We're still out there right
11 this second collecting samples.

12 There's a certain amount of logic that
13 says that for whatever reasons we've gotten those
14 time lags, they're really something we should
15 consider getting a more encompassing set of data
16 that deals not only with OU-1 wells but also OU-3
17 wells as essentially a unit, if you will, because
18 the OUs are very closely tied together and they
19 interact so dramatically because of their proximity.

20 In that regard, then, we're very
21 interested in what information the new wells in OU-1
22 would tell us in terms of the interactions off site
23 coming onto site, and we would probably be in a
24 position of wanting to have at least two rounds of
25 data from those wells in addition to everything else

1 so that we have more than one snapshot, if you will,
2 in time with all of this information available to
3 us. And then on that basis move forward with the
4 risk assessment.

5 Combined or not is something I think we
6 could probably discuss as time goes on, but
7 certainly it appears that combined would be
8 potentially preferable at this point, and generate
9 the risk assessment from those two sets of data and
10 then move forward into the feasibility and ROD
11 process from that juncture on.

12 ROBLES: What do you guys think?

13 BURIL: I think they call this the "pregnant
14 pause" in show biz.

15 CUTLER: That would have impact on the RIs.

16 BURIL: It would have impact on a lot of things.
17 The concept is out there. But of course, it's got
18 to be recognized that it's going to have a fairly
19 dramatic impact on the deliverable schedule.

20 LOWE: I think one thing we need to ask
21 ourselves before making this decision is do we
22 expect that the new wells will change our
23 understanding of the site. And if the answer to
24 that is yes, then I think we do need to wait until
25 we have at least two rounds of data from these

1 wells.

2 If you think these new wells are just
3 going to kind of refine what you already know, then
4 I don't think it's necessary to wait for those new
5 wells.

6 ROBLES: I think they are.

7 BURIL: We think we are going to have an impact.

8 MELCHIOR: Certainly in a vertical sense.

9 ROBLES: In a vertical sense, but more
10 importantly, MW-23, what's going to happen? I
11 believe it's going to really be very critical. I
12 think if you do risk assessment now, I believe
13 you're going to have a major modification in the
14 risk assessment. And I don't want to have a
15 document there suddenly flip-flop because we've got
16 two documents out there that don't make sense.

17 BURIL: One of my favorite phrases is "You can't
18 unring a bell." I think we would ring the bell and
19 then wish we hadn't, possibly, depending on what the
20 data tells us.

21 LOWE: I agree with this. I just wanted to make
22 sure everybody understood we needed to go through
23 that thought process to make that decision.

24 BURIL: Sure.

25 LOWE: If you guys want to add anything.

1 BISHOP: Debbie and I talked about that during
2 the break, the effects. I think we're going to see
3 a dramatic effect, or possibly, at 24.

4 BURIL: Yes.

5 ROBLES: Yes.

6 BISHOP: That may really change your approach to
7 what's going on.

8 ROBLES: Right.

9 BURIL: That's right. I agree.

10 BISHOP: At that point, going through the
11 process is nice practice, but I'm not sure it's
12 worth doing that effort --

13 MELCHIOR: It's a waste of money.

14 BISHOP: -- at this point.

15 BURIL: That sounds like we're pretty much in
16 agreement on that issue, then.

17 LOWE: We can make a decision now that we're
18 going to wait until we get two rounds of data from
19 those new wells. Maybe during that time we can get
20 all the risk assessors together again and try to
21 find the best way to pull the old data --

22 BURIL: Into it if need be.

23 ROBLES: We may need to have a meeting with risk
24 assessors just to determine that.

25 LOWE: Yes. I think that may be a good idea.

1 (Discussion held outside the record.)

2 BURIL: Were there any other issues in terms of
3 the operable units, then, that we need to deal with?

4 I think we've got an understanding in
5 terms of how we're going to deal with on-site and
6 off-site considerations. So I think once we have
7 the new wells and are able to get all that
8 information, I think we'll understand to a very
9 large degree. So as far as -- MW-10 is a
10 highlighted point, but I think we've already
11 encompassed that through our discussion here.

12 CUTLER: Just on a detail end, on this
13 monitoring, we're basically talking VOCs and maybe
14 some chrome, basically our long-term monitoring
15 program based on previous data. Were we thinking of
16 two complete rounds of semi-volatiles, metals?

17 BURIL: That's a good point, Mark. Let's ask
18 the question, to be clear, what we intend to have in
19 those two consecutive rounds of data that we used
20 for the OU would be for the RA.

21 We've pretty well established that our
22 principal concerns, I think, were the VOC compounds
23 and chromium. At one location we found chromium. I
24 think we're still obligated to continue to look for
25 it. But things such as a lot of the other metals --

1 pardon me. All the other metals thus far, we found
2 virtually nothing that even approaches MCLs.

3 The semi-VOAs we've seen a few of those
4 hits, but I don't know what importance to associate
5 with those since none of them, that I can recall
6 right now, have any --

7 CUTLER: Phthalates.

8 BURIL: Phthalates, I think we all know those
9 are coming from the plasticizers. Caffeine, I hate
10 to think all the Coke I've drunk over the years is
11 killing me. It could very well be.

12 LOWE: Was the caffeine detected on base, or
13 just off base?

14 BURIL: Just off base.

15 LOWE: The phthalates were on base or off base?

16 BURIL: I think it was both.

17 CUTLER: We have two rounds. We're working on
18 the second round for OU-3. Two complete rounds
19 sampled under RI conditions. We spent a lot of
20 money sampling for all these things, metals and
21 semi-volatiles and various things. It would be nice
22 to be able to use that data maybe to pare down this
23 subsequent sampling instead of do it all over again.

24 BURIL: Let me throw a proposal on the table
25 here, that we would do essentially the same suite of

1 analyses as we have proposed in the monitoring
2 program that you have in front of you for those two
3 rounds of data, recognizing that the older data
4 looked at virtually everything that might have been
5 a concern and we have been able to narrow that scope
6 now on the basis of that information.

7 BISHOP: Maybe I'm getting confused, but I think
8 these are the same rounds, the data. I mean, we're
9 talking about starting the long-term monitoring as
10 soon as you put the new wells in.

11 BURIL: Exactly.

12 BISHOP: I'm talking about a different set
13 of --

14 BURIL: Right. That's why we want to be sure
15 we're clear on that.

16 CUTLER: The risk assessment would be based on
17 that data.

18 BISHOP: And the data that you've collected.

19 BURIL: And the previous data. Just that the
20 data that we have to collect in the future would be
21 a narrowed set of what we've already collected based
22 on the data that we've already collected.

23 BISHOP: If there's any indications of other
24 constituent that have been found, like
25 semi-volatiles, even though they're not of major

1 concern after you compare to the volatiles, they may
2 need to be addressed in the risk assessment or,
3 maybe even more, in the --

4 ROBLES: Feasibility.

5 BISHOP: -- feasibility study. When you're
6 looking at treatment, they may not be treatable. It
7 may be at that point, along in the monitoring
8 schedule, it may be that when we start looking at
9 remedial actions, it may be important to add some of
10 those that have been found back into the monitoring
11 schedule because they may affect how you're going to
12 do treatment.

13 BURIL: The feasibility of actually doing the
14 treatment. That's true. That's very true.

15 BISHOP: Does that kind of cover what you were
16 saying?

17 ROBLES: Okay.

18 ROBLES: We already agreed to it in the
19 long-term monitoring.

20 BURIL: I guess that's where I'm at. We're
21 basically agreeing we will do the same thing that is
22 identified in the long-term monitoring with the
23 caveat that if we identify something that needs to
24 be evaluated we will add that in and evaluate it.

25 Is that what I understood?

1 BISHOP: Right.

2 ROBLES: Just like we were going to do in the
3 long-term monitoring.

4 BISHOP: Right.

5 BURIL: Great. All right.

6 ROBLES: 3.

7 BURIL: Number 3 was covered in number 1.

8 I guess we're down to number 4, then, on
9 the schedule.

10 ROBLES: This is the killer.

11 NAKASHIMA: Can I say something, maybe, before
12 you go on?

13 BURIL: Sure.

14 NAKASHIMA: We had scheduled a teleconference
15 with the toxicologists, and then that was postponed
16 because of the furlough.

17 BURIL: That's right.

18 NAKASHIMA: Are we going to reschedule this at
19 some time?

20 ROBLES: We need to.

21 BURIL: I think, yes, we do need to. I think
22 one of the things we should probably do is now that
23 we have in general agreement the types and timings
24 of data that we're going to have in the risk
25 assessment, we should get our individual risk

1 assessors informed of this thing, make sure they
2 understand, and then after that, after we get Jon's
3 information as well, after that, bring those folks
4 together via telecon or in a face-to-face or
5 whatever, and then move forward on the basis of the
6 decisions that we've reached today.

7 ROBLES: Right. I agree.

8 BURIL: I guess the date on something like that
9 is probably, to a limited degree, to be determined,
10 principally because we want to get the information
11 from Jon. And I assume we'll probably get that
12 within a few days.

13 BISHOP: Yes.

14 BURIL: I don't anticipate that being a big
15 problem.

16 ROBLES: How about two weeks from today? Could
17 we get that within two weeks from today? The end of
18 this month, the 1st?

19 BISHOP: Let me just take a look.

20 ROBLES: Two weeks from today is the 1st of
21 February.

22 BURIL: You're talking about having his
23 information by then?

24 ROBLES: Yes.

25 BISHOP: Oh, you'll have the information by

1 then.

2 MELCHIOR: I think he was saying the conference
3 call.

4 BURIL: The actual meeting.

5 I'm not sure. Do you folks have your
6 toxicologists' schedule available to you today?

7 LOWE: Memorized.

8 BURIL: Why don't we do this. I'll offer up my
9 secretary's services to coordinate with all of you
10 to find out what days are available from your
11 toxicologists, and then we can pull them all
12 together.

13 BISHOP: I thought we also wanted to either have
14 a conference call or meeting to discuss the --

15 ROBLES: Methodology.

16 BISHOP: -- soil vapor.

17 ROBLES: Methodology first, and then we could
18 have the toxicologists.

19 BISHOP: That's what I thought I was hearing so
20 when you said the 31st I was thinking that was the
21 day --

22 ROBLES: I think it's important, because you're
23 not going to get the toxicologists in there before
24 you can --

25 MELCHIOR: I don't want the toxicologists for

1 that meeting.

2 BISHOP: No. No.

3 BURIL: No. We don't need them.

4 ROBLES: That's what he's saying. You guys need
5 a meeting. We all need to have a meeting together
6 on methodology.

7 MELCHIOR: Right. Exactly.

8 BURIL: I think they're separate topics in large
9 part.

10 ROBLES: Yes. Yes.

11 BURIL: So we can schedule that with the
12 Regional Board somewhat separately.

13 BISHOP: DTSC needs to --

14 LOWE: I want to be in on it.

15 ROBLES: I think these two, they need to be
16 involved in this. So you're talking about two
17 conference calls.

18 BURIL: Two conference calls. Sure.

19 Let's look at it this way, then. Jon, if
20 you get that information to us soon, and we want to
21 talk about the --

22 BISHOP: You'll have it next week.

23 BURIL: -- soil gas vapor aspect of this, give
24 us a week or two after that. We're probably looking
25 at, say, the first week of February.

1 ROBLES: Or the last week of this month.

2 BURIL: Or the last week of this month, yes.

3 One of those two.

4 LOWE: I was thinking it would be useful to
5 start setting up monthly conference calls and pick a
6 day of the month so we don't end up calling
7 everybody six times, and everybody just keep it open
8 every month.

9 ROBLES: There's enough little topics that we
10 can do it like this.

11 LOWE: Right.

12 BURIL: That's fine. Shall we make this first
13 conference call the soil gas topic?

14 LOWE: Yes.

15 ROBLES: 1st of February.

16 BURIL: And go on from there.

17 ROBLES: Yes.

18 BURIL: Let's not say a given date. Let's say a
19 given day, meaning like the first Wednesday of the
20 month, first Tuesday of the month, something of that
21 nature, so that you can just allow it to continue to
22 float on whatever day it happens to be on.

23 LOWE: I think Mondays are good because I tend
24 not to travel on Mondays.

25 MELCHIOR: Mondays are fine.

1 NAKASHIMA: Mondays are bad.

2 ROBLES: Do you want Wednesdays, Thursdays,
3 Tuesdays?

4 RICHARDS: The only problem with Mondays is the
5 holidays always fall on Mondays.

6 BURIL: Tuesdays in the morning are not good.

7 ROBLES: How about the first Thursday of every
8 month?

9 BURIL: That would be ideal.

10 MELCHIOR: Bingo.

11 ROBLES: First Thursday of every month.

12 RICHARDS: If the government is in operation.

13 ROBLES: Or if not, you guys still need to have
14 your meetings. I'm serious. You still do.

15 LOWE: We need to have RPM meetings if you're
16 furloughed?

17 ROBLES: No, no. I'm saying the conference
18 calls, not the meetings.

19 BURIL: Not the meetings face to face. You can
20 still call, I would think.

21 ROBLES: I'd like to be there, but the key is
22 I'm not allowed to come.

23 NAKASHIMA: But if Debbie is on furlough, she
24 can't attend.

25 LOWE: That's true. If EPA is furloughed --

1 MELCHIOR: You're not going to be on furlough.

2 ROBLES: We'll talk about that later.

3 (Discussion held outside the record.)

4 MELCHIOR: Can Loran set up the time for the
5 close?

6 BURIL: What we can do is we can arrange for --
7 are we agreed on the first Thursday of the month,
8 first of all?

9 NAKASHIMA: Except July the 4th is a Thursday,
10 the first Thursday in July. So that will have to be
11 switched.

12 BURIL: Maybe go to the second one. On those
13 days where there's going to be a conflict like that.
14 Thanksgiving will be another one later on this year.

15 BISHOP: Where is Thanksgiving on the first
16 Thursday?

17 BURIL: That's true.

18 ROBLES: Go ahead.

19 LOWE: When we have our conference calls, I
20 think before people hang up the phone, we should
21 make sure we have the next date settled.

22 ROBLES: Yes.

23 BURIL: I think that's reasonable.

24 LOWE: We'll aim for the first Thursday of every
25 month, but if it doesn't work --

1 BURIL: At what time?

2 MELCHIOR: In the morning, please.

3 BURIL: Preferably. For your purposes,
4 definitely.

5 NAKASHIMA: 10.

6 ROBLES: Shall we say 10:00 o'clock?

7 MELCHIOR: 10 is perfect.

8 BURIL: Okay.

9 MELCHIOR: So we've scheduled the first one for
10 February 1st at 10:00 A.M.

11 ROBLES: Right. Pacific time.

12 MELCHIOR: That's right.

13 BURIL: Fine.

14 MELCHIOR: You don't want to in at 7:00?

15 BURIL: I'm not getting up at 6 in the morning
16 to get here. No way.

17 ROBLES: I always have that problem with video
18 conferences. They have it at 9 on the east coast
19 and I end up at 6:00 o'clock here.

20 BURIL: The subject at this particular one will
21 be the soil vapor methodologies that we've been
22 talking about thus far, which Jon will be able to
23 help us out on, and anything else as far as any
24 other topics that might come along during the course
25 of time.

1 That's it.

2 ROBLES: That's it.

3 MELCHIOR: I assume that JPL would set up that
4 800 number.

5 BURIL: Yes. We will have a number available.
6 It's not an 800 number. Nice try, though. But
7 we'll have a central number for everyone to call in
8 to so you just ring in and join the conversation.

9 ROBLES: Okay. Sounds good on that.

10 Are we ready to talk about the schedule?

11 BURIL: Yes. Now let's talk about schedule. I
12 think it's fairly obvious to everyone the schedule
13 is going to have fairly dramatic impacts as a result
14 of the risk assessment discussion.

15 ROBLES: We're developing a letter to request
16 formally.

17 BURIL: Yes. We have letters coming out to each
18 of you regarding schedule requests, and so on, to
19 try and get ourselves back in line with the FFA,
20 recognizing we're kind of askew right now.

21 As far as OU-1 and 2, the work that we're
22 talking about in dealing with those two is something
23 that we are hopeful at this point -- now, I will
24 tell you all that I've given Foster Wheeler an
25 unofficial "get moving" on getting these things

1 going. And it is on record now, Dan.

2 It's unofficial only insomuch as we have a
3 lot of contractual issues that we have to wade
4 through. But we are hopeful that all those will be
5 readily taken care of, and providing we don't end up
6 with any problem with funding from NASA, we are
7 anticipating we would hopefully be in the field come
8 July 1 of this year, completing the work for OU-1
9 and OU-2.

10 ROBLES: Starting, not completing.

11 BURIL: Starting. Putting the bit to the ground
12 and starting.

13 RANDOLPH: August 1.

14 BURIL: Pessimism will not be tolerated.

15 RANDOLPH: Realism.

16 BURIL: As far as the ultimate completion dates,
17 those are kind of nebulous, but we're probably
18 looking at about 18 to 24 months overall to get all
19 three wells in, get the sampling done and all the
20 other aspects taken care of.

21 Now, again, I leave that fuzzy only
22 because our discussion today, and particularly with
23 OU-2, was something we hadn't quite anticipated in
24 terms of schedule. It may or may not have a major
25 impact. I don't know at this point.

1 We are going to be very diligent in trying
2 to get you a firm schedule, if in concept this all
3 works, within the next two weeks.

4 BISHOP: That's, what, essentially six months to
5 get out in the field is primarily contractual?

6 ROBLES: Contractual issues.

7 BURIL: We get wrapped around the axle with that
8 kind of stuff.

9 ROBLES: Contract work orders, CWOs, have to be
10 issued and then sub CWOs have to be issued.

11 BURIL: For example, the scope of work that
12 Foster Wheeler has currently under my contract is
13 nearly exhausted. We have to modify that contract
14 to include all the rest of this now. That, based on
15 all the federal regulations we have to jump through,
16 is an extremely tedious process. And then getting
17 all the subcontractors on board, the drillers and
18 the surveyors and the utility people and all the
19 other ones that support us, is an equally tedious
20 process.

21 MELCHIOR: And the approval of subcontracts by
22 NASA.

23 BURIL: Right. That's part of that tedium, but
24 it is mandated by our prime contract with NASA. We
25 have no way around it.

1 BISHOP: I'm not complaining. I'm just getting
2 it on the record.

3 BURIL: Okay. That's fine. Sure. So that's
4 where we're at with Operable Units 1 and 2.

5 Operable Unit 3, I'm going to look to the
6 collective group of Foster Wheeler folks to give us
7 an indication because if we're talking about that
8 length of time for OU-1, I would anticipate OU-3
9 would be very similar. Because we are going to need
10 the data.

11 MELCHIOR: We're dependent on the sampling
12 events.

13 BURIL: That's my point exactly.

14 MELCHIOR: In effect, the wells are all
15 installed. Not "in effect." They are actually
16 installed. They have been sampled once, they have
17 been sampled twice as we speak. We're just
18 assembling that data as it's generated.

19 BURIL: But if we're going to tie the two risk
20 assessments together --

21 MELCHIOR: The only limiting reagents is the two
22 simultaneous sampling events between OU-1 and OU-3.

23 BURIL: Right.

24 MELCHIOR: That's why it's dictated.

25 BURIL: So once we have those data in hand, it

1 sounds to me that in large part all three operable
2 units will have their work completed very close to
3 being simultaneous. So on that same generalized
4 time frame again, without having super specifics to
5 be able to offer you right now. Gives you an idea.

6 NIOU: What's the expected completion date?

7 BURIL: That's what I'm saying, Stephen, is that
8 I can give you the 18- to 24-month window, but I
9 can't give you an absolute date at this point
10 because we need to work all these things.

11 NIOU: Meaning field work will be 18 to 24
12 months?

13 BURIL: No, no.

14 MELCHIOR: No. The time the report would be
15 delivered to you.

16 BURIL: No. The time the report would be
17 delivered to you.

18 NIOU: Okay. I thought of the field work.

19 BURIL: Oh, no.

20 MELCHIOR: That's assuming final concurrence
21 with the scope of work.

22 BURIL: That's one aspect I want to be sure that
23 I --

24 ROBLES: This is the RI.

25 BURIL: Yes. This is the RI.

1 MELCHIOR: Right.

2 BURIL: This is not ROD. This is the RI.

3 LOWE: Is the risk assessment included as part
4 of the RI?

5 BURIL: Yes. At that point in time it would be.

6 ROBLES: At that point in time it would be.

7 NIOU: Okay.

8 NIOU: A question: Will you send out a
9 revised -- this?

10 BURIL: What is that?

11 NIOU: Investigation report or investigation
12 proposal, or will your answer --

13 BURIL: I was just getting to that. I have a
14 proposal to put before you, and see whether you feel
15 comfortable in doing this.

16 If you're comfortable, what I would
17 propose is that we allow the meeting minutes, with
18 your recognized concurrence being documented in
19 those, to be our go-ahead to move out and start the
20 changed scope of works we've talked about today as
21 opposed to generating individual agency letters that
22 concur individually.

23 BISHOP: I don't have any problem with that.
24 Does that fit with --

25 LOWE: I think that's fine.

1 BURIL: Penny?

2 NAKASHIMA: Yes.

3 BURIL: Great. Then it's official.

4 MELCHIOR: We only have one issue to decide.

5 BURIL: What's that?

6 MELCHIOR: MW-23.

7 BURIL: That's right. That's the last hitch in
8 our git-along here.

9 NAKASHIMA: I'm holding out here.

10 LOWE: Can we go back to the letter that's going
11 to ask for the extension? Will it lay out very
12 clearly a timeline of why you need two years longer
13 to get out the RI, that it takes six months to get
14 out in the field, that you expect the field work to
15 last four months?

16 BURIL: We can do that. We can do that. That
17 should not be a major concern for us. We should
18 have that for you very easily.

19 LOWE: Okay.

20 BURIL: You're right. The last vestige of
21 concern is Well 23, with the exception of number 5
22 on here, which I guess we need to talk at least in
23 concept on.

24 ROBLES: The biggest thing that I'm concerned
25 about is that Chuck has somebody here and I have

1 somebody waiting at NASA headquarters for these
2 answers. I've gotten calls before the last furlough
3 about "Are you going to obligate that money? We
4 need to pull it because the Republican Congress
5 wants it." And we told them we are going to do
6 that.

7 So this is very beneficial. This meeting
8 was very important because it helped us to obligate
9 that money as quickly as possible and then work on
10 for next year.

11 All indications are that we're going to
12 get, hopefully, a continuing resolution, and a
13 short-term continuing resolution with an omnibus to
14 get us all the way to the election date after that,
15 so we're looking at maybe another 30-day short-term
16 CR, with an omnibus CR to take us after that all the
17 way to the election year. Because the issues are
18 being --

19 BURIL: You mean through September of this year?

20 ROBLES: To the election.

21 BURIL: Through November of '96?

22 ROBLES: To the election. Because the issue is
23 philosophical in Washington. The issue between the
24 Republicans and the President is of a philosophical
25 nature that has created gridlock. That's what has

1 been discussed in Washington. They want to let the
2 election decide on who is going to be the winner.
3 And this is very critical because our NASA budget is
4 tied in with other agencies, VA, HUD and EPA.

5 What's happening right now from our
6 indications in talking is that they want to,
7 "eviscerate" is the word that's used, EPA and they
8 want to use it tit for tat. We'll "give you NASA if
9 you give us HUD. We'll give you VA if you give us
10 EPA." That's what they want to do. And what they
11 want to really do is do away with HUD and EPA. Have
12 a major impact.

13 That's the indication we have from our
14 Congressional liaison at NASA headquarters.

15 Now, that means that a window of
16 opportunity to obligate money is very critical.
17 That's why this meeting is very important. If we
18 can get the monies obligated, it doesn't matter what
19 is programmed. If you can get them obligated, they
20 won't touch them. But if you don't have them
21 obligated, you lose it. We had that question.
22 That's why we want to keep this going particularly,
23 to get at least to a record of decision. That's my
24 ultimate goal.

25 BURIL: So in terms of the impacts of a

1 potential furlough, they appear to be minimal at
2 this particular time.

3 ROBLES: At least minimal. I think the
4 Republicans have recognized they're never going to
5 move the President. The President has elevated this
6 issue to a higher level of philosophical differences
7 whereas the polls have shown that the Republicans
8 are losing out in the opinion poll. The issue of
9 winner-take-all society to a great society, that's
10 the bottom line. And people are saying, "Well, we
11 agree with the Republicans, but we want Medicare and
12 Medicaid and Social Security." So it is a dichotomy
13 in the public. Silent majority, so to speak. So
14 they're starting to decide to let the issue be done
15 at the polls in November of this year.

16 And I don't think anybody can stand
17 another furlough. If it happens again, I'm telling
18 you, it's going to be terrible.

19 BURIL: We've discussed number 4 to as great a
20 degree as we can. We're down to number 5. We're
21 back on the record.

22 I just want to pass along the fact sheets
23 and information sheets that you have attached to
24 your agenda. These were generated here over the
25 last few months. These are an effort -- first of

1 all, the "Superfund Solutions," this is informing
2 our neighbors of what went on and thanking them for
3 their support. We actually had very little
4 consternation on the part of the general public
5 while we were out there drilling and hammering and
6 doing all the things we were doing.

7 The other ones are identifying just some
8 general information in terms of what's groundwater,
9 what's a soil vapor well, what's a groundwater well,
10 what's a chemical, why is it a concern, a little bit
11 on the water cycle, that kind of stuff.

12 These are just basically intended to allow
13 people to get some very basic understanding of what
14 it is that we're going to be talking about in an RI
15 or an FS or in a ROD. They need to have some basic
16 understanding of what an aquifer is, why are we
17 concerned about construction of a multi-port well.
18 How do you do that. What is it? These are some
19 very low-key, if you will, attempts to get that out
20 there.

21 First of all, this has not been
22 disseminated. It is currently in only four other
23 people's hands outside of JPL and NASA, and that's
24 you four right here. So what we'd like you to do,
25 please --

1 ROBLES: Hot off the press.

2 BURIL: It is literally hot off the press. Came
3 off this Monday.

4 What we'd like you to do, please, is take
5 a look at these. We have a goal of releasing these
6 things within two weeks.

7 What we'd like you to do is to please go
8 through them. If you have comments, please get back
9 to us within two weeks. Quite honestly, what we'd
10 like to do is if we haven't heard from you in that
11 time, we will assume no comment and go to press.

12 BISHOP: I don't have any problem with that.

13 NAKASHIMA: So by the 31st of January?

14 BURIL: Right. In essence, I would hope that
15 come our February 1 thing, we will doublecheck with
16 you, of course, just to make sure that we hadn't
17 missed something you had sent, or whatever. Then
18 come February 2nd, it's out the door.

19 BISHOP: I can tell you right now you've got to
20 change the date on this. January.

21 BURIL: The date? I know.

22 As far as any other topics, I guess we're
23 up to the point of throwing it open to the floor and
24 seeing what else is out there.

25 We're still on MW-23. I forgot about that

1 one.

2 BISHOP: I think we should take just a
3 five-minute, ten-minute break.

4 ROBLES: Ten-minute break.

5 BURIL: Ten-minute break. Good idea.

6 (A recess was taken from
7 2:42 P.M. to 3:02 P.M.)

8 BURIL: Okay. We're back on the record.

9 I guess the topic at hand is Well 23 and
10 where we stand with that. I don't know if you folks
11 actually took time to talk about that. I'm assuming
12 you did.

13 LOWE: We did.

14 BISHOP: We did discuss it. We've got kind of a
15 two-part response. Part one is that we have no
16 objection to 23, as is all agreed.

17 We did have one concern on the new wells
18 and the existing wells for the long-term monitoring,
19 that we would like to see a compilation of the data
20 to make sure, just to doublecheck that there aren't
21 any chemicals of concern that should be included in
22 any of the wells in addition to the VOC and the hex
23 chrome.

24 BURIL: That's reasonable.

25 BISHOP: We kind of feel we think we've got it

1 all, but then sometimes I look of this and I'm not
2 sure that's got all the data in it. So if we could
3 get a compilation of all the results from the
4 groundwater monitoring.

5 BURIL: This is going all the way back for
6 everything?

7 BISHOP: All the way back. Just kind of a dump
8 of your data.

9 BURIL: I'm thinking, Mark, something to the
10 effect of having a list of components that we found
11 and then having the concentrations in individual
12 wells that we found.

13 CUTLER: I have it with me.

14 BURIL: You got it with you? Hand it to him.

15 BISHOP: So that was our only caveat on the --

16 BURIL: We don't have OU-3 on there.

17 CUTLER: Is that what you mean?

18 BURIL: You want OU-3 on there as well?

19 BISHOP: We will need that --

20 BURIL: That's part of your concern.

21 BISHOP: What I'm concerned with is that we go
22 ahead and we say that we're only going to do
23 volatiles and hex chrome, and we get the data at the
24 RI and it says, well, this well had this --

25 BURIL: This other thing.

1 BISHOP: -- and you never sampled for it again.

2 ROBLES: Right. Right.

3 BURIL: That's a very valid point.

4 CUTLER: We're going to have to make copies.

5 This the same data tables.

6 BURIL: Is it the same one we've given them
7 before?

8 CUTLER: I don't know if we gave that to them.
9 You have it.

10 BURIL: What's the date on it?

11 {CUTLER: It's Table 26, Metals and Volatiles,
12 Semi-Volatiles, Historical.

13 BURIL: You folks already have this particular
14 table.

15 MELCHIOR: We'll make another copy.

16 BURIL: We can make another copy for you, but
17 expand it with OU-3.

18 BISHOP: This is everything?

19 BURIL: We have it on two tables. We have
20 volatiles and semi-volatiles, and then metals on two
21 tables.

22 BISHOP: This is it? But this doesn't include
23 some of the wells we talked about today.

24 BURIL: For example?

25 CUTLER: They weren't all installed.

1 RICHARDS: That's what he's asking.

2 ROBLES: He wants all of it, what's been
3 installed recently.

4 BISHOP: We talked about Well 14 and Well 21.

5 CUTLER: Everything we have you have.

6 NIOU: Really?

7 CUTLER: Well 14 was just put in for the RI.
8 It's only been sampled twice.

9 BISHOP: Right. But we don't have the data.

10 CUTLER: It's on this table here. This table
11 was not given to them? I think this was given to
12 them as well.

13 BURIL: Let's do this. Why don't we get the
14 thing together, give it to you again and that way we
15 can all be certain you have what you need.

16 CUTLER: What we did, Jon, is this table is the
17 OU events with Well 14, the recent wells, and this
18 is all previous events.

19 BURIL: Let's combine those in one table that
20 lays out the constituents and the wells and the
21 concentrations.

22 BISHOP: So we'll have one package that says
23 this is all the groundwater data that we have and
24 there won't be any confusion. Because I obviously
25 only brought one of them when I came today.

1 BURIL: This would be something that would be
2 useful for you folks because then you would have one
3 table that you could hang onto and know that's
4 everything.

5 CUTLER: It's nothing you don't already have.

6 BISHOP: That may be.

7 BURIL: Let's give it to them so they have it.

8 ROBLES: But it's not in one document.

9 BURIL: Let's give it to them so it's
10 convenient.

11 MELCHIOR: And a well map.

12 ROBLES: And a well map.

13 BISHOP: Yes. Definitely.

14 BURIL: You'll get two well maps, one for off
15 site also. Because otherwise it gets too crowded in
16 small scale.

17 BISHOP: Okay.

18 BURIL: That's it. So we're green light on 23
19 as well.

20 I guess the last thing, then, is we
21 normally go through action items. Debbie made a
22 suggestion to me in this meeting that we officially
23 approve the meeting minutes of the previous meeting.
24 And I, following parliamentary procedure, so move.
25 Does anyone have any discussion or a comment?

1 BISHOP: No.

2 ROBLES: Okay.

3 BURIL: They're approved.

4 LOWE: They're approved.

5 BURIL: Great.

6 ROBLES: What is outstanding?

7 BURIL: The one thing we've got outstanding here
8 from the last meeting is we got into our discussion
9 then about our concern about the possibility of EECA
10 for the area that we're going to be doing the four
11 borings in.

12 I would like to suggest that rather than
13 continue that conversation at this point that we
14 table that as an open action item until after we get
15 a little more information, a little more
16 understanding of what it is that we need to deal
17 with.

18 ROBLES: It's too early to discuss an EECA
19 without looking at that. That may be something we
20 might want to do in a monthly teleconference once we
21 get enough information.

22 BURIL: Once we have some more information we
23 can bring this back up, but we'll leave this open as
24 an open action item so we don't forget about it.

25 BISHOP: Okay.

1 BURIL: And that was it.

2 ROBLES: Anything else?

3 LOWE: That's the only action item?

4 BURIL: That was it. Everything else has been
5 addressed.

6 ROBLES: Everything else has been addressed.

7 BURIL: So we're in good shape.

8 What I have here, this is a notification
9 of the inability to meet schedule. This is
10 something that was a hopeful approach to notify you
11 folks officially that the schedule that's within the
12 FFA now currently is not going to be met, but that
13 we are going to be providing you the request for
14 extension with all the data that you had indicated,
15 Debbie.

16 ROBLES: And a proposed schedule for you to look
17 at. But this is to meet the FFA requirements that
18 we have to request and tell you that.

19 BURIL: This is just to notify you that we
20 aren't going to meet the schedule, basically. So
21 this is hopefully sufficient for that purpose. This
22 is for each of the agencies.

23 ROBLES: Three operable units, one, two, three,
24 four letters for each operable unit. That's 12
25 letters, 3 for each.

1 BISHOP: One would have been sufficient for me.

2 BURIL: Let me see here. All right. We had
3 them mixed, is the problem. Here is Stephen's.

4 ROBLES: Okay.

5 BURIL: And there is Jon's. There you go, Jon,
6 in triplicate.

7 Let me make sure these are all for Penny.
8 Yes, they are.

9 As promised, I am meeting with Foster
10 Wheeler tomorrow now to get moving on these things.
11 And we will hopefully have a schedule to you within
12 the next two, three weeks, along with an explanation
13 of the need for the extensions, and so forth.

14 ROBLES: We have a proposed schedule for you
15 folks.

16 BURIL: Is there anything else that you folks
17 have a desire to bring onto the table while we're
18 all here?

19 NAKASHIMA: The Hahamongna?

20 BURIL: Thank you. I know you wanted me to say
21 that. Thank you.

22 Just to give you a brief update on what I
23 know of the Hahamongna project and where that
24 stands. Jon, I don't know if you're involved in
25 this to any degree or not.

1 The latest word that I've been able to get
2 through the grapevine and through the newspapers is
3 the Hahamongna project is beginning to hit the skids
4 a bit. They are in a tremendous turmoil politically
5 over who runs the operating company. There was an
6 internal election of some sort. I'm not sure about
7 the internal process, but the acting executive
8 director, Charles Thomas, was deposed and a new
9 fellow, Tim Brick, was put in.

10 The public went berserk. They did not
11 want Brick. They wanted Thomas. They have gone so
12 far as to disrupt City Council meetings, and so
13 forth, to make their point known. I do not know the
14 status of that particular aspect of the politics of
15 the thing.

16 My understanding is that they are still in
17 a quandary as to how to deal with that whole issue
18 of what the public wants versus what they want
19 internally. It's a very political issue that I
20 don't have a great deal of insight in right now.

21 ROBLES: They may be suing to hold the project
22 until this issue is resolved, which is going to
23 delay it, some say, as much as three to five years.

24 BURIL: Now, another aspect of this is that the
25 City Council has now begun to look at other aspects

1 of utilization of this area. The one that was in
2 the newspaper most recently, and I think this was
3 about a month or so ago, is that they are talking
4 now about possibly making it a golf course, not an
5 extension of the Brookside Golf Course that they
6 have down below Devil's Gate Dam. Whether that
7 comes to fruition or not, we have absolutely no
8 idea.

9 It appears to be a very fluid situation,
10 one on which there's no clear resolution apparent
11 and no time frame in which that resolution might
12 come about.

13 ROBLES: We don't know what the property is
14 going to look like ultimately.

15 BURIL: I don't think they do either. I really
16 don't think they have a clue at this point.

17 We went through a rather lengthy
18 negotiation with the City of Pasadena regarding
19 keeping our east parking lot. The outcome was we
20 still park cars there. Initially they wanted us out
21 of there by June of this year.

22 ROBLES: Because they were going to go along
23 with this project, but now it's delayed. I don't
24 know what they're going to do. So it's really a
25 quandary what we have to do with that.

1 BURIL: As far as impacts to us, who knows right
2 now. I couldn't tell you. Until they actually come
3 up with what it is they're going to do and when, we
4 really don't know how to approach it.

5 Anything else?

6 ROBLES: Questions? Comments?

7 BURIL: I personally would like to thank each of
8 you because I think this has been possibly one of
9 the most productive meetings we have ever had. We
10 have made major milestone steps in a number of
11 areas, and I think that's wonderful. We can get off
12 the dime and start getting something done now. I
13 thank you all for that very much.

14 I thank you also for the flexibility of
15 your schedule. I know, Debbie, this is an
16 imposition on you. I thought we were going to go
17 more than a day. Maybe you can go out in the field
18 and observe the sampling or something of that nature
19 while you're here.

20 LOWE: I think Jon and I tomorrow are going to
21 go out and oversee the operation.

22 BURIL: I apologize for asking you to stay and
23 not having anything to talk about. But overall, I
24 think it's really a pretty good thing we got through
25 everything we did.

1 RANDOLPH: I think that apology, Chuck, is very,
2 very well founded. And I think that points out the
3 productiveness of what we had today.

4 BURIL: Yes. I agree. The fact that we got
5 through this in one day rather than two just shows
6 how well we were able to cooperate and get things
7 done. I think it's wonderful.

8 With that, thank you very much, and I will
9 adjourn the meeting.

10 NOVELLY: No. No.

11 BURIL: No, I won't adjourn the meeting. I'm
12 being told it's not adjourned. What is it?

13 NOVELLY: First we need to just review the
14 action items from this meeting and then set the next
15 meeting.

16 BURIL: Please do.

17 NOVELLY: What we've come up with today is that
18 NASA will look for a more cohesive way to present
19 the data on maps, for example, a blown-up section of
20 the maps showing all of our locations, and we'll
21 send that to the agencies.

22 We will add a provision that we can take
23 more than one sample from the pits for OU-2 if field
24 conditions indicate the need.

25 We will sample for VOAs, semi-VOAs and

1 chrome and hex chrome in the trenches, but not for
2 TPH.

3 For the long-term monitoring, we will
4 build in some MS/MSDs for EPA Method 524.2.

5 Debbie and Penny are going to check to see
6 if their agencies have come to any form of agreement
7 on how risk assessments will be handled.

8 We will be doing five quarters for the
9 long-term monitoring and will make changes based on
10 the fourth quarter summary report.

11 We'll look at including performance
12 evaluation samples to check the laboratory.

13 NASA is going to look at the possibility
14 of retaining cores from the wells.

15 We're going to reschedule a phone
16 conference or meeting with the toxicologists, and
17 JPL will coordinate this.

18 We've set up a monthly phone conference,
19 set for the first Thursday of each month at 10:00
20 o'clock. JPL will call all the RPMs with the
21 conference call number prior to the meeting.

22 ROBLES: Also, if that first Thursday is a
23 holiday it will be the second Thursday.

24 NAKASHIMA: I can't do second Thursdays. I
25 already have something on the second Thursday of the

1 month.

2 NOVELLY: I guess if we get into a holiday
3 situation we'll call ahead and try to reschedule.

4 BURIL: We can maybe arrange something on a
5 case-by-case basis.

6 BISHOP: As Debbie said, the end of this first
7 conference call we'll make sure the next one is
8 clear.

9 BURIL: We'll make sure the next one is clear
10 and we'll get it set.

11 ROBLES: So we move it a day ahead or behind.

12 NOVELLY: So our first conference call is set
13 for February 1st at 10:00 o'clock and we'll be
14 discussing soil vapor methodologies. Jon is going
15 to get us some information for that within the next
16 two weeks.

17 NASA is going to send a new proposal for a
18 schedule to the agencies within the next two weeks,
19 and that letter will include the reasons why the
20 schedule has to be extended.

21 The agencies are going to review the
22 information sheets and comment by January 31st. If
23 we don't have any comments by that date, we will
24 assume that there are none and release the sheets,
25 after confirming at the meeting on the 1st.

1 The agencies will get a compilation of all
2 results from the groundwater monitoring so that they
3 can evaluate the constituents to be included in the
4 long-term monitoring.

5 And we're leaving the EECA discussion
6 action item open.

7 Now we need to set the meeting.

8 BURIL: Now we need to set the next face-to-face
9 RPM.

10 RANDOLPH: And the minutes from today's RPM
11 meeting will serve for the approval --

12 NOVELLY: Right.

13 RANDOLPH: -- of all items.

14 BURIL: Right. Right. The minutes of this RPM
15 meeting will serve as the agency approval for the
16 things discussed today.

17 RANDOLPH: Correct.

18 BURIL: Okay. Well, here we are, middle of
19 January. Three months hence is the middle of April.

20 MELCHIOR: How about the 17th?

21 BURIL: Mondays are not good.

22 MELCHIOR: The 17th is a Wednesday.

23 BURIL: Oh, I'm looking at '95. I'm sorry.

24 BISHOP: I'm going to be out the first week and
25 the third week of April.

1 BURIL: What is that again?

2 BISHOP: The first and third week of April.

3 BURIL: So the week of the 1st and the week of
4 the 15th. How about the 24th?

5 LOWE: I can't do.

6 BURIL: Cannot do.

7 ROBLES: How about the 10th?

8 LOWE: 10th is fine with me.

9 ROBLES: 10th of April.

10 BURIL: 10th. 10th. 10th. Done.

11 ROBLES: 10th of April.

12 BURIL: 9:30 A.M. again?

13 ROBLES: Sounds good.

14 BISHOP: And the 11th, too?

15 BURIL: I don't think we'll need it. I don't
16 think we'll need it.

17 As far as the possibility of having to
18 postpone this on the basis of furlough, we're just
19 going to have to wait and see what happens. We have
20 no idea at this point.

21 BISHOP: I just have one other thing. I don't
22 know what your situation is about travel, but if
23 it's going to be -- you may be able to know earlier
24 on what your level is. I know that for the other
25 RPMs that I work with, San Gabriel and San Fernando,

1 I have essentially zero travel at this point. So
2 all meetings now are in San Francisco for all those.
3 I don't know when you would know.

4 BURIL: As far as having to go to EPA
5 headquarters there, I guess we'll have to figure out
6 as we understand what the heck is happening with the
7 budget and all that.

8 BURIL: All right. Have we anything else on the
9 table?

10 RANDOLPH: I was just going to mention, I know
11 that everyone has more or less seen all of the
12 proposed locations for all the 12 vapor wells and
13 during the site walk you got an idea of where the
14 soil borings are going to be down in the parking
15 lot. Have you seen the locations for MW-21, 22 and
16 23 -- or, excuse me, 22, 23 and 24?

17 BISHOP: I've seen --

18 RANDOLPH: If you haven't, you can stop on the
19 second floor and go out to the north side of the
20 building and stare out at the parking lot. That's
21 the site for number 22.

22 BURIL: You've seen 24 already.

23 RANDOLPH: Seen 24.

24 BURIL: We can point out the building that 23
25 will be behind. That might be something we could do

1 tomorrow morning. We can walk around and show you
2 things.

3 LOWE: Yes. That would be good.

4 BURIL: That sounds great. Okay.

5 I think we are adjourned.

6 (The proceedings adjourned at 3:21 P.M.)

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