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REMEDIAL PROJECT MANAGERS' MEETING

NASA/JET PROPULSION LABORATORY

16 April 1997

ATTENDEES:

Jon Bishop, RWQCB-LA

Charles L. Buri, JPL

Mark Cutler, Foster Wheeler

Joe Franco, Foster Wheeler

Richard Gebert, DTSC

Debbie Lowe, US EPA

Stephen Niou, URS

Judith A. Novelly, JPL

B.G. Randolph, Foster Wheeler

Peter Robles, Jr., NASA



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Reported by: Louise K. Mizota, CSR 2818

1 Pasadena, California

2 April 16, 1997

3 1:10 P.M.

4

5 BURIL: Basically, we wanted to give you an
6 update on where we stand on the project overall.
7 We'll let B.G. start off with the update on where we
8 are with the OU-2 field work. Overall, I think it's
9 fairly good news.

10 RANDOLPH: We're finished.

11 BISHOP: That's good news.

12 LOWE: Really?

13 RANDOLPH: With all of the preliminary work,
14 yes. The only thing we have left right now is to
15 get the analyses back and do the soil vapor
16 sampling. We finished up Saturday afternoon with
17 the last soil vapor well.

18 We were planning on drilling two step-outs
19 at the location of DP 2, but we more or less found
20 natural soils, nice and dark and gray down in that
21 particular area, at a depth of about four to four
22 and a half feet.

23 Richard was there when we opened up the
24 core bags and made the decision that the step-outs
25 were not needed. Otherwise, we would be finishing

1 up the drilling this afternoon. We would be
2 installing the last soil vapor well this afternoon,
3 then doing the trenches probably tomorrow or the
4 next day.

5 But it's all over with. We're finished.

6 ROBLES: How far ahead are we on the schedule?

7 RANDOLPH: A couple weeks. And four days of
8 that would be attributable to not doing the step-out
9 work.

10 ROBLES: Anything found? Anything preliminary?

11 RANDOLPH: I have no results back whatsoever.
12 The only thing that we have are the FID readings
13 from the bag core, which we would let sit for a few
14 minutes after it came out of the hole in the bag,
15 punch a hole in it, then take an OVA reading, FID
16 reading every five feet.

17 And we did find some elevated readings up
18 in the B 26 area, which is up by MW-7, Monitoring
19 Well 7, and north of B 16, old B 16, which was the
20 hot spot that prompted the four additional deep soil
21 vapor wells in that area. And they were
22 considerably higher than any of the FID readings
23 that we got in the hole that we drilled next to
24 B 16.

25 We were only supposed to put in five

1 sampling tips below the bottom of B 16, but before
2 we started drilling there, we tested it out and the
3 five top soil vapor sampling tips were plugged. I
4 have no explanation as to why. They are plugged.
5 Waterlogged I could see, but they are plugged. We
6 could neither purge nor blow into them with the
7 syringes. I have no idea why. So we put in five
8 additional ones above that equivalent in depths to
9 the five that we already had in before. Two of them
10 I deepened five feet. The one I believe went to,
11 instead of 60 and 80 it went to 65 and 85 this time
12 based upon the FID readings. That's the only basis
13 I had. And it made it a little bit better on the
14 spread.

15 BURIL: So basically, instead of having two
16 wells, so to speak, one with five on the top, one
17 with five on the bottom, you've now got one well
18 with all ten?

19 RANDOLPH: That's correct.

20 ROBLES: Okay.

21 RANDOLPH: And we did not get as deep in these
22 wells as we had hoped primarily because the water
23 has risen about 40 feet since last October when we
24 put together the estimates for the depths of the
25 holes that we were going to be putting in.

1 CUTLER: Just as a note, in October it was the
2 lowest water levels we've ever seen in the nine
3 years we've been on this site.

4 RANDOLPH: MW-7, water depth in October was 256
5 feet. The Monday before we started -- excuse me.
6 The Friday before we started the actual field work
7 it had risen to 210. By the time we drilled the
8 hole up there on top it dropped to 212. And we were
9 in water at 212 in our hole up there.

10 BISHOP: So that's going to bring the water
11 level back to what we had seen before, then.

12 BURIL: Slowly, yes. It's coming back up to
13 average levels.

14 CUTLER: You probably noticed the last quarterly
15 monitoring report there were five upper screens that
16 we couldn't sample.

17 BISHOP: Right.

18 CUTLER: We've never had that before. And
19 that's the same period of time B.G. was talking
20 about.

21 GEBERT: Do you have any reason for the increase
22 in the elevation?

23 CUTLER: Just extended pumping and relatively
24 low rainfall. Every year is different. Every year
25 we've been monitoring is different. They turn the

1 pumps on and off for different lengths of time,
2 different amounts of rainfall. And this year the
3 lower rainfall and the longer pumping.

4 BURIL: Just in the time I've been working on
5 the project I've seen horrendous differences in
6 rainfall here. The first year I was here they had
7 close to 30 inches. There was 27.6 inches of rain
8 here at the Laboratory.

9 GEBERT: Right. It was '92, I think.

10 BURIL: Right. It was being deluged all the
11 time. The Arroyo flooded from bank to bank and from
12 Oak Grove Park all the way across to the levies that
13 protect the spreading basins. Devil Gate Dam was
14 like 50 or 60 feet deep in water. It was unheard of
15 at that point.

16 The following year wasn't as bad, but it
17 was still pretty heavy rain. The next year after
18 that it was dry and we had like 8 inches of rain
19 overall. So there are just some really wild
20 fluctuations. Couple those with the spreading and
21 the pumping, the water levels here just go erratic
22 sometimes. So I think we're seeing that.

23 B.G., do you want to comment on the sonic
24 drilling technique and how that worked for you?

25 RANDOLPH: For soil vapor well work, I think it

1 is the absolute highest priced Cadillac you could
2 possibly conceive. It's beautiful. It went great.
3 We were able to core through boulders, gravel. I
4 could have brought some core with me, but it was a
5 little too heavy. But it was great.

6 Also, another thing, by comparison to
7 other drilling methods, we can always get a sample.
8 No matter where we are, we can get a sample, whether
9 it's an undisturbed sample we could get with a split
10 spoon or a grab sample that we can get out of the
11 core bag. And many times when we were not able to
12 actually get a good, full split spoon sample and we
13 needed two sleeves, two full sleeves to make up one
14 sample for all the analysis that we have to make.
15 And this way we could always go back to the bag
16 sample and get it within a half a foot, get it out
17 of the previous bag.

18 When we stop at a depth, like if it was
19 150 feet and we wanted to get a sample, we couldn't
20 drive it, so we'd go to the 150 foot end of the bag
21 from the previous run and get it from 149 to 150.
22 It's absolutely the perfect way to go.

23 And depending upon the soil moisture
24 content, most of the core came out. Unless we were
25 grinding through boulders and gravels and cobbles,

1 we did not really find elevated temperatures. We
2 would come out at basically ambient temperature.

3 BURIL: It was amazing. I remember one time I
4 went out there they were drilling through sand.
5 They pulled out the core and put it in the bag. I
6 remember I put my hand in the bag and it was cold.
7 It was amazing.

8 NIOU: I have two questions. One is when -- I
9 notice at the -- remember we were discussing in San
10 Francisco, remember the last sample at the -- near
11 the B 16 bore hole, the soil is kind of warm. I
12 couldn't understand what the reason for the warmth.

13 RANDOLPH: Gravel.

14 NIOU: But that was pretty -- I feel no gravel
15 in that, in the whole five-foot interval. Remember
16 the last time I was there?

17 NOVELLY: Yes.

18 NIOU: The last five foot was a little bit warm.
19 I know it's not from the drilling, but I just
20 couldn't find the reason.

21 I don't know. I just ask you if you know
22 of any reason.

23 RANDOLPH: No. Usually the only time I've found
24 where temperatures were elevated a little bit was
25 when we had real coarse material we were going

1 through.

2 NIOU: That one was moist. I can feel it. It
3 was moist. It was right at above the water table.

4 NOVELLY: I can see the moisture, but you didn't
5 say anything about warmth so I didn't --

6 NIOU: Warmth, I know it's not from drilling,
7 because I had so many of the core samples. I know
8 it's not from drilling, but I just couldn't find out
9 the reason, explain why that one is warmer than the
10 others. It's not only from -- if from drilling, the
11 surface should be the warmest. No, inside is warmer
12 than outside. I don't know.

13 That's the first question. If you don't
14 know, I don't know.

15 RANDOLPH: No. I have no idea.

16 NIOU: The second is: How do you compare the
17 cost of the sonic drilling? This is not for this
18 project; for my other project. I recommend them to
19 use sonic drilling. But they're asking me what's
20 the cost comparison from this one to air percussion
21 and hollow stem.

22 BURIL: HSA.

23 RANDOLPH: Again, it would depend primarily to
24 the depth that you're going to.

25 NIOU: 120 feet.

1 RANDOLPH: 120 feet?

2 NIOU: Yes.

3 RANDOLPH: I would go sonic. I think it's
4 cheaper than dual wall air percussion and you'll get
5 a much better sample than you'll ever get out of
6 hollow stem auger. It might be a little bit more
7 expensive than the hollow stem auger, but you're
8 going to have to have some mighty heavy equipment to
9 get to 120 feet.

10 NIOU: Okay. Yeah. I just wanted to have the
11 rationale so when they ask me why do you suggest
12 this.

13 RANDOLPH: Right. For this particular project,
14 the total cost of the sonic rig on the bids we
15 received came in under the dual wall air percussion.

16 ROBLES: What are we talking about? How much?

17 RANDOLPH: Total? \$125,000.

18 ROBLES: How many feet did you drill with that?

19 RANDOLPH: That's what they came in at. Of
20 course, I haven't tallied up the footage. But we're
21 way short of that right now because of the deletion
22 of the two wells and the water table coming up and
23 shortening the depth of the other wells.

24 But the footage rate was, and you can't go
25 by this because of the backfill, substrate and

1 everything, the drilling footage rate was \$55 a
2 foot. But there are many other line items in there
3 which go into the total.

4 NIOU: Okay.

5 BISHOP: You said deletion of two wells?

6 BURIL: The step-out boring.

7 RANDOLPH: The step-out holes.

8 BURIL: Okay. Any questions?

9 BISHOP: I have one question. We're going to
10 get to it later, but we can probably talk about it
11 now.

12 We've had in the original workplan a
13 two-month delay on sampling built in when we weren't
14 sure if it was going to be air percussion or sonic.

15 RANDOLPH: Correct.

16 BISHOP: I don't see much reason to continue
17 that delay since we did them with sonic. Are you
18 planning to go out and get the vapor samples?

19 RANDOLPH: Well, this is another question that I
20 believe Chuck was going to bring up later.

21 BURIL: You hit it right on the nose, Jon,
22 because that was one of the things I was going to
23 bring up.

24 We have a new schedule that we've put in
25 place as a result of some of the problems we've had

1 in our procurement with Operable Units 1 and 3. I
2 think you'll be pleased. We actually didn't change
3 deliverable dates much at all. Given the fact we
4 have this pretty good schedule impact with the field
5 work, if you folks are amenable to it, I don't see a
6 need to wait two months. I don't know what a,
7 quote, reasonable waiting period would be, given the
8 type of work that we've done. But we could
9 reasonably move that up, I think, at this juncture,
10 and then work through the rest of the schedule and
11 make the adjustments to that as we go.

12 I don't have a major problem.

13 GEBERT: We discussed this among ourselves and
14 we came to the conclusion we really don't need to
15 have any, quote, holding time using the sonic
16 drilling. So whenever you can fit it in.

17 BURIL: So in other words, go for it.

18 LOWE: As soon as you can.

19 ROBLES: ASAP.

20 BURIL: Okay. You got it, B.G.

21 RANDOLPH: All right, sir.

22 BURIL: You're in. Go for it.

23 RANDOLPH: Okay.

24 LOWE: I think Richard and maybe Jon are
25 interested in overseeing the actual soil vapor work.

1 So if you could give us five days' notice before you
2 start that.

3 BURIL: Why don't we do this. I'd like to be
4 here. I may be gone next week and the week after
5 that. Why don't we make it for like two weeks
6 from --

7 RANDOLPH: Well, we have to get the CWO in
8 place.

9 BURIL: That's what I'm saying. We've got to
10 get the CWO in place and do all of that.

11 ROBLES: Two weeks?

12 BURIL: We'll shoot for the two weeks. The CWO
13 part of it may be a little bit cumbersome, but we'll
14 see what we can do.

15 RANDOLPH: Sure. No problem.

16 MR. GEBERT: I'll be on vacation the second and
17 third weeks of May. So if Jon can come out.

18 RANDOLPH: I'm going to be gone a few days
19 either side of May 17th, both sides of it.

20 BURIL: Well, we'll work it through, one way or
21 the other. We'll see what kind of schedule.

22 RANDOLPH: I think it's all reasonable to move
23 it up. I think I mentioned during the telephone
24 conversation, the last one we had, that the Santa
25 Ana region found some very deep soil vapor wells.

1 They only waited four days after drilling. And I
2 guess they had very good results.

3 BISHOP: I wouldn't expect there would really be
4 any need to wait at all, especially if you're not
5 doing much disturbance.

6 RANDOLPH: That's correct.

7 BURIL: That sounds fine. Let us try to pull
8 together all the different schedules and we'll get
9 out there faster than two months. That's fine. Not
10 a problem.

11 Okay. Anything else on that?

12 Let me describe a little bit about what's
13 happening in some of the other areas of the project.

14 One of the things that we did yesterday
15 and, Peter, I haven't even had a chance to talk with
16 you about this yet, but we went over to MET. What
17 does that stand for again?

18 CUTLER: That's Multimedia Environmental
19 Technology.

20 BURIL: Basically our modelers, groundwater
21 modelers. We've gotten down to the point now where
22 we're beginning to get to a fairly well calibrated
23 groundwater model. Some of the things that this
24 model is beginning to show us, they're kind of
25 interesting.

1 Just as an indication, and one of the
2 things that I'll share because I think we'll be able
3 to show it to them at the next meeting, if not
4 sooner, is that there appear to be fairly distinct
5 layers in the aquifer here, that we do have
6 aquitards built into layering here on the site.
7 Now, that's in the area of the Arroyo.

8 To the west of us and to the south of us,
9 it's not nearly as distinct. We appear to have at
10 least one, maybe more, aquitards resident here at
11 the site. And it tends to explain a little bit
12 about why we see such radical drop-off in terms of
13 contaminant concentrations from MW-7 to the edge of
14 the property, where we see orders of magnitude drop
15 and no real explanation for it. Well, this may be
16 part of it, at least.

17 So we've got some interesting information
18 from that. We're able to correlate that nicely
19 because we thought we saw some of that in the soil
20 logs and we were able to correlate that nicely with
21 the soil logs. So it looks like we've got some
22 interesting information coming from that.

23 BISHOP: Have they done matching of the heads?

24 BURIL: Yes.

25 BISHOP: So they show at different elevations

1 which way it is going?

2 BURIL: Depending upon how it's being pumped by
3 these four wells. There will be times when it's
4 down. But there are other times when it's up. It
5 just depends on how hard they're pumping these
6 wells.

7 CUTLER: This is a really complex thing to
8 model. The model, he's thrown in six layers, plus
9 two zones of lower permeability, these aquitards,
10 plus you have all the pumping, all the spreading
11 going on. He picked an 18-month period to
12 calibrate. So we have a lot of data. With all of
13 our West Bay wells, there's all these vertical data
14 as well. So it's ending up being, what did he say,
15 a 60,000-node program.

16 BURIL: Six layers with 60,000 nodes. It is a
17 very, very intense program. That's using the same
18 one we identified earlier, the mod flow. He's done
19 a lot of things. We're putting together the whole
20 package now. I just wanted to tell you folks about
21 it because I was kind of surprised by some of the
22 things that he was pointing out.

23 When we stopped and thought, well, wait a
24 minute, let's look at the soil logs, sure enough,
25 this is looking like we have, at least in certain

1 areas, a multilayered system. And it's not
2 surprising when you consider how close we are to the
3 alluvial fan coming down out of the hills here. But
4 further away you wouldn't see as much. Closer in,
5 like right here and in the Arroyo, you would see
6 more.

7 So it's beginning to give us a little
8 better understanding of what's going on. I'm
9 hopeful that by the next meeting we'll actually be
10 able to show you some of that stuff. It's still
11 going through final calibration. In fact, we're
12 looking now to see what is going to be entailed in
13 doing, what did they call it, reverse
14 parameterization?

15 CUTLER: Yes. I don't know the correct modeling
16 term. But he's got the model refined to within a
17 few feet plus or minus of actual observed water
18 levels. Then he's going to process where they turn
19 the model loose and the model picks its own
20 parameters to match exactly, so we can fine tune the
21 predicted water levels with the actual water levels.
22 That may take about a month.

23 BURIL: Basically, what it comes down to is you
24 tell the computer I want you to get it this close
25 instead of this close and it goes off and it does

1 its thing. Apparently this thing is so complex that
2 it takes a 200-megahertz computer a half an hour to
3 get the whole thing done in one run. He said that
4 the parameterization technique could take as much as
5 a week of straight run time.

6 CUTLER: Instead of inputting hydraulic
7 conductivities and other things, you input the water
8 levels and let the computer pick the other
9 parameters. So now we know enough about it, like
10 the hydraulic conductivities, he knows what's going
11 to be real, he can constrain the computer to only
12 pick values between a narrow band and match water
13 levels exactly.

14 BISHOP: Just a bit of caution, that lots of
15 times what you need to do to match water levels is
16 to create things like low permeability zones or
17 change your hydraulic conductivity to extremes to
18 match your system.

19 BURIL: Right.

20 BISHOP: What that means in the real world
21 sometimes is that you have zones that are of
22 somewhat lower conductivity but are not aquitards.
23 So you have to remember, to match the model doesn't
24 necessarily mean that you can then say, oh, because
25 this is what we had to do to reach the water levels,

1 we know now that we've got a good aquitard.

2 BURIL: No. Actually, it's the other way
3 around. We've been looking at this. Because we
4 looked at the soil logs, saying wait a minute, why
5 isn't this matching? And in looking at it, we saw
6 that there were sub layers. There were more
7 fine-grained materials that were I don't know how
8 thick. I think that Perry has more of the
9 information. But this would make sense that this
10 would be a lower permeability unit at this location.
11 And based on that, they began to model that lower
12 permeability, see if they could make the heads work
13 better, and it did.

14 CUTLER: So we're going to try to keep the
15 computer from coming up with unrealistic numbers.

16 BURIL: We don't want to pretend there's
17 concrete at 300 feet or something like that.

18 BISHOP: What I was just trying to tell you is
19 you don't -- it's tempting, or not maybe the best
20 approach to then take the information you have to
21 use to build a model and then try and use that to
22 build your conceptual model.

23 BURIL: You're right. Exactly.

24 BISHOP: It's a tool and you have to fit things
25 into it because it's a simple --

1 BURIL: Absolutely. We recognize that it is
2 only a tool. It's one that's based on a number of
3 assumptions and parameters and if you go outside
4 those parameters or those assumptions, the tool
5 becomes less useful, if not useless. We're very
6 aware of that and we're trying to make sure we don't
7 create the kind of problem that you're describing.

8 CUTLER: The computer will think one of those
9 aquitards is a discrete pancake layer. We know it's
10 probably something like this, and in this area we
11 have more lower permeability beds than in this area.

12 BISHOP: Right.

13 NIOU: Also, for modeling, would this
14 complication of the geology, recharge, everything,
15 with the rainfall and discharge of water, how do you
16 call those? Recharge basin?

17 CUTLER: The spreading basins.

18 NIOU: Yes. Recharge basin. I would think
19 probably we have to look at the cost effectiveness
20 of getting real close data and spend lots of money,
21 or think about maybe this is enough for us to
22 predict future fate and transport only.

23 BURIL: In fact, I think our total modeling
24 effort to date has been, what, about 60 K.

25 NIOU: That's good.

1 BURIL: So I mean we have not put in a lot of
2 money on this because we recognize its limitations.
3 But we found this one company, MET, through Mark and
4 B.G.'s efforts. These guys are very adept at taking
5 models and making them work very well. They've had
6 a fair amount of success in doing these kind of
7 things for relatively low cost.

8 NIOU: That's good.

9 BURIL: So we're pleased with what we see so
10 far. It looks like, if nothing else, this will help
11 us be able to identify reasonable remedial scenarios
12 if they involve pump-and-treat systems. So that's
13 something that's going to be a benefit at the end
14 regardless.

15 Okay. Any other questions on that?

16 Let me go ahead and hand this out. We'll
17 jump to number 2 on the agenda. Let me hand out
18 this schedule of deliverables. Take a look at it.
19 This is what I think, Debbie, you asked for at one
20 point to kind of get all the different deliverables
21 over the course of the project identified with a
22 date.

23 What I have in here is I've got the
24 monitoring events, the annual reports, the draft RA,
25 RI, FS, the draft-finals, all of that built in.

1 We're going through the entire project all the way
2 to the finalization of ROD for Operable Units 1 and
3 3.

4 Basically, I've taken into account what we
5 anticipate now will be our projected start dates for
6 Operable Unit 1 and 3 field work.

7 Amazingly enough, the dates of the
8 deliverables didn't change more than about two weeks
9 overall. The reason was one that we couldn't figure
10 out at first. We really had to scratch our heads on
11 this and try to come up with why was it coming out
12 that we have a couple-month delay and almost no
13 impact to the schedule in terms of the deliverables.

14 As it turned out, when we first put the
15 schedule together, the fourth groundwater sampling
16 event was going to be the first RI event. And we
17 actually postponed starting that to coincide with
18 the completion of the activities for the well
19 construction for Operable Unit 1. Well, when we
20 realized that we weren't going to make that, we just
21 said okay, skip it, move it right to the next one
22 that comes along. Well, it happened to fall right
23 on it. So everything that was based on that fourth
24 event ratcheted up by about two months.

25 We lost another month and a little more.

1 I can't remember all the different idiosyncrasies,
2 but basically it came down to that when we got down
3 to the final ROD date, it had changed only by about
4 two weeks. So we were able to compress in the first
5 part of the schedule by the different phasing. And
6 the last part of the schedule basically stayed the
7 same. But because of the compression of the first
8 part, we kept everything in reasonable sync with
9 what we had before.

10 So this is what I think you were asking
11 for, Debbie.

12 LOWE: One thing we need to do here, though, is
13 to call out what are the primary documents.

14 BURIL: Okay.

15 LOWE: So obviously, these groundwater sampling
16 event documents are not primary. I'm not sure that
17 I agree that the risk assessment is a secondary
18 document.

19 BURIL: It's called out in the FFA. That's why
20 I put it in like that.

21 LOWE: Okay. If we can just star the RI, the
22 FS, the proposed plans and the RODs as being --

23 ROBLES: Why don't you call them out.

24 BURIL: Why don't we just go down the list.
25 We'll star them all here together and we'll know

1 we're all --

2 NIOU: OU RI.

3 BURIL: Skip down to the fourth one, draft OU-2
4 RI and risk assessment.

5 NIOU: Yes.

6 BURIL: Then the draft OU-2 FS report will be
7 the next.

8 NIOU: Yes.

9 BURIL: Then the next line, draft OU-1 and 3
10 risk assessment. Now, that's a secondary document.
11 I took that right out of the FFA. If we don't have
12 any question about that, I think the next one will
13 be the RI report itself for that operable unit.

14 And then the draft OU-1/OU-3 FS report.

15 And the draft-final OU-2 RI and RA.

16 Skipping to the next page, the draft-final
17 FS for OU-2.

18 Then we have the draft-final risk
19 assessment submittal. Again, that draft-final risk
20 assessment is a secondary document. We can skip
21 that one and go to the next line for the final RI
22 for OUs-1 and 3.

23 Refresh my memory. Is a proposed plan a
24 primary document?

25 NIOU: Yes.

1 BURIL: Okay. Then we have the final RI --
2 excuse me, final FS for OU-1 and 3.

3 And then the draft proposed plan for OU-1
4 and 3.

5 Draft ROD.

6 And then draft ROD again for the OU-1 and
7 3.

8 And then final ROD.

9 And then the last line, final ROD for OU-1
10 and 3.

11 So those are the primary documents.

12 BISHOP: Let me see if I'm clear on this. We
13 just completed the field work for OU-2?

14 BURIL: Basically, yes.

15 BISHOP: The deliverable on that is 13 months
16 from now.

17 BURIL: Well, see, now that we don't have these
18 built-in delays these are going to change for
19 Operable Unit 2. This was built in without having
20 that compression on the field work. So these would
21 actually change for OU-2 now.

22 LOWE: Before how long did we have between the
23 completion of the field work and the submission of
24 the draft report?

25 BURIL: I don't remember. Did you bring the

1 original schedule?

2 NOVELLY: No.

3 CUTLER: I've got one.

4 RANDOLPH: The second round of soil vapor
5 sampling wasn't scheduled until October. The first
6 round was in August. So it will be considerable.

7 BURIL: We had long delays built in.

8 Let's see. The drilling was supposed to
9 be done June 10. That was with everything, with the
10 step-outs and everything else. So we're about six
11 weeks, seven weeks ahead of schedule on that.

12 The analytical work for OU-2 was supposed
13 to start -- actually, it was supposed to end at the
14 end of October, like you said.

15 So if we want to move these things up, we
16 could see four months or more ahead of schedule.

17 ROBLES: We've got other contractual issues. I
18 think we should stay with the schedule and push all
19 the work as far up as we can. You don't want to say
20 that you'll do it in such and such a time and then
21 all of a sudden you have to go back to your
22 schedule.

23 BURIL: No. That's true. I can't argue with
24 that.

25 ROBLES: I think we need to press and get this

1 work done.

2 Debbie, correct me if I'm wrong, you want
3 to see acceleration, you want to see work done, and
4 I agree with you. We'll use this as a template.
5 Those are the drop dead dates. If we can push
6 anything forward, then we will.

7 RANDOLPH: Peter, may I kind of present a little
8 bit of an example. When we mention Cassini, we've
9 got outside pressures. Our drilling schedule was
10 very drastically affected in the order that we
11 drilled our holes based upon hardware, flight
12 hardware testing in Building 79. We had to stay
13 quite a ways away. Also in Building 306, we had
14 quite a little bit of static from the optical
15 instruments folks.

16 There is a window right now around
17 Building 79, and they mentioned that it was going to
18 last two to two and a half months before they go
19 into dire straits on additional flight hardware
20 testing again, which is extremely sensitive to any
21 vibrations. That's just about the time that we
22 would start drilling now Monitoring Well 24 up on
23 Aero Road. And when it comes to flight hardware,
24 that's what NASA and JPL is all about.

25 ROBLES: That takes precedence.

1 RANDOLPH: Anybody else's schedules and what
2 they want to do workwise takes secondary to tenth
3 place by comparison. And if they will not allow you
4 in there to cause vibrations close to their
5 facility, you can forget about doing any field work.

6 ROBLES: The Millennium projects are not going to
7 be small projects; more of them. And they have the
8 same prima donna requirements as anybody else.

9 BURIL: Oh, I know.

10 RANDOLPH: Just some simple construction work at
11 Building 79 was not allowed during the day. They
12 had to do it at night. All they are doing is
13 modernizing the front entrance, putting in a small
14 elevator, which is way out in front of the building
15 to allow a secondary --

16 ROBLES: I think what I'm suggesting is that we
17 keep the schedule as we have it, and wherever we can
18 push ahead of that so that any of these things that
19 come to us we've got the work done already, whenever
20 we can.

21 BURIL: That's fine.

22 ROBLES: We need to push as hard as we can to
23 get this schedule accelerated. Leave these dates.
24 Because we're going to be putting ourselves in a
25 hole. If Millennium comes in there and says "Stop

1 until we get our tests done," we're in trouble.

2 LOWE: I think we should be looking at it the
3 other way and saying since we gain two months here
4 and two months there let's move the schedule up, and
5 then if you can't make that, then you need to send
6 us a letter request saying you can't make this date
7 and this is the reason why.

8 It helps me to be able to have that in
9 writing, to be able to go to my management and say,
10 "Look, they're like sending all these things into
11 space and it's slowing up our Superfund work. Is
12 this okay, or do we need to do something about it?
13 Do there need to be some higher level discussions
14 between our agencies?"

15 ROBLES: But isn't there a time delay by the
16 time we get that approval? What happens if your
17 people say "No, we're not going to give you guys an
18 extension"? That's the question I have.

19 BISHOP: We've already given you --

20 ROBLES: I know.

21 BISHOP: I think that the agencies have been
22 quite open to time delays. It's not like we've
23 never put in stipulated penalties on any time delay.

24 So I think it's unfair to say, well,
25 because we're going to gain some time, we don't want

1 to show any of that in the schedule because maybe
2 we'll be delayed on something else.

3 ROBLES: The second thing. If we change the
4 schedule, we've got to change it again and again and
5 again. How is this going to look in the public
6 records where we see Iteration of Schedule 22,
7 Iteration of Schedule 45?

8 BISHOP: We could go back to the original
9 schedule and then work from there. We have no
10 iterations, and then we're done. Right?

11 ROBLES: That's true.

12 I just want a basis. If we accept it,
13 then, that's fine, as long as we understand that
14 these things will come in. I have no problem, if
15 you're comfortable with it.

16 BISHOP: I think the thing we should look at, on
17 OU-2, we're done with the field work. So the things
18 that are going to be a delay from NASA's point of
19 view are getting in to do sampling. Is that the
20 same kind of a pressure as drilling in terms of
21 sensitivity to equipment and things like that?

22 ROBLES: No. No.

23 BISHOP: So I think what we should do is look at
24 OU-2 and say okay, we're done with field work,
25 everything from now on is some sampling and

1 preparation of documents. Let's take what we have
2 as our schedule from finishing field work and see if
3 we can ratchet that back.

4 BURIL: That's very reasonable.

5 ROBLES: Okay. Let's press on with that. I
6 just wanted to ensure that we're all on the same
7 wavelength.

8 BURIL: That's fine. I think Jon has a very
9 good point. We have had a number of schedule
10 incursions, let's say, excursions. Certainly we've
11 actually gotten something that's worked well for us.
12 We should take advantage of it, and take credit for
13 it as well.

14 CUTLER: What B.G. pointed out may have more
15 serious implications for OU-1.

16 BURIL: Absolutely.

17 CUTLER: Our deepest well, our 800-foot well is
18 right next to this building.

19 BISHOP: I don't see there's any reason to
20 change the schedule until we get to that field work
21 point.

22 BURIL: Yes.

23 BISHOP: We may have to move it the other way is
24 what you're saying.

25 RANDOLPH: Right.

1 BURIL: Exactly.

2 RANDOLPH: The example I was giving is not for
3 OU-2 but for OU-1. We could expect another
4 reasonable delay.

5 BURIL: Depending on what happens, yes.
6 Unfortunately, we can't get flight hardware to give
7 us long enough term projections to tell us whether
8 it's going to be this month or this month. It's
9 kind of when they get to it. If they get to it
10 early, they'll do it early. If they get to it late,
11 they'll do it late. It all depends on all the other
12 facets of these projects. That's JPL's business.
13 That's NASA's business. If you step in the way of
14 that, you might as well step in the way of a freight
15 train.

16 ROBLES: Let me put something across there. If
17 the regulators are amenable, why can't we try to
18 get, like in OU-1, the work that's critically needed
19 to be done before these impacts happen to us? Is
20 there a contractual issue? Is there a work load
21 issue?

22 BURIL: Yes. There is a contractual issue that
23 we're working right now.

24 ROBLES: Because I think that's the key.
25 Possession is nine-tenths of the law. Your rig is

1 out there. You're doing that work. They say
2 "Stop." You say "Wait, we're almost finished with
3 it. Give us a couple of days and you can start your
4 own stuff that you need to." I really think that we
5 should try to do that as well.

6 BURIL: Currently the way we're looking at it
7 now, without going into the detail that this one
8 does, which is something I heard kind of
9 universally, I thought, from the agencies, that you
10 don't want to see that, you wanted to see this, at
11 least at this point, we're actually talking about
12 starting the field work, what was it, middle of May,
13 Mark?

14 CUTLER: You said first week of June.

15 BURIL: Okay. The first week of June to
16 actually drill. Your notifications let me know for
17 the two weeks and the mobile time and so forth that
18 come in the middle of May.

19 CUTLER: The driller is ready.

20 BURIL: Yes. We've got everything lined up.
21 It's just a matter of getting the last contractually
22 difficult procedure out of the way. And it's been a
23 nightmare.

24 LOWE: Is there any way you can put more of a
25 priority on this contractual work, knowing the

1 implications of this?

2 BURIL: Yes. In fact, that's been done. We're
3 shooting to have that done within the next two to
4 three weeks.

5 BISHOP: I appreciate what Peter is saying, but
6 essentially the driller is ready, you're ready to
7 go. All you're waiting on is some funding approval.
8 The scope of work is in and approved. Right?

9 BURIL: Everything is in. It's a matter of a
10 contract between Foster Wheeler and JPL. That's the
11 key. We've used up all our dollar value on our
12 contract. That's the key. Now we have to extend
13 that contract in terms of length of time, in terms
14 of dollar value that's associated with it, and so
15 forth. We couldn't do that until we had all of our
16 fixed scope. Now, we had that a while ago. We
17 started working it, but then we started running into
18 problems with DCAA audits and things of that nature
19 that's taking much longer than we anticipated, and a
20 variety of other internal issues that now identify
21 that we have another -- this delay that's built in.
22 It's the same delay we talked about earlier. But
23 now that we have got the things working, we're
24 looking between two and three weeks that we should
25 have it resolved.

1 BISHOP: Two to three weeks would be the
2 beginning of May.

3 BURIL: Would be the beginning of May. And then
4 you get the two-week notification and we finish off
5 the other stuff, and away we go.

6 CUTLER: I think that still puts it around the
7 first of June.

8 BURIL: Yes.

9 ROBLES: I just think we need to -- because I
10 believe the Millennium projects are going to really
11 be the major impact for us, because what I see is
12 that we're going to have lots more work and a lot
13 more buildings being utilized for space hardware on
14 a smaller level and they're all going to scream the
15 same thing. These big flight hardware issues are
16 going to come in. That's a concern. I know there's
17 contractual constraints. We just need to punch
18 that, press that, whatever we need to do.

19 LOWE: Is the two weeks' notice something that
20 stands on its own that delays everything for two
21 weeks, or is it that you give us two weeks' notice
22 before you start?

23 BURIL: That's what it is.

24 LOWE: The second?

25 BURIL: Yes.

1 BISHOP: So you're not going to get up until
2 you've got everything ready to go, then call us and
3 say "We can start in two weeks?" Because if that's
4 the case --

5 BURIL: Is there a difference between what you
6 two just said?

7 BISHOP: Yes. Because if two weeks before you
8 got everything set to go you call us, that doesn't
9 delay anything. If you wait until everything is set
10 to go and say "Okay, in two weeks you can start
11 drilling," you're adding a two-week delay.

12 BURIL: No. I understand what you're saying.

13 NOVELLY: No. We always call you when we
14 anticipate we're ready to go in two weeks.

15 BURIL: Right. We're actually mobilizing and
16 doing everything else during those two weeks that we
17 let you know.

18 BISHOP: Great. I just wanted to make sure it
19 wasn't --

20 BURIL: It wasn't just sitting on our haunches
21 for two weeks, no.

22 RANDOLPH: No. I've never done that, Jon.

23 BISHOP: I didn't think so.

24 NOVELLY: That's why your notification always
25 says we plan to start on that date and then if

1 something happens I'll call you, a couple days this
2 way, a couple days that way, just so we're ready.

3 BURIL: Generally it's viewed as the
4 mobilization period for getting the driller up on
5 the site and actually start drilling the day we tell
6 you.

7 RANDOLPH: I'd like to give some credit, too,
8 for finishing up the OU-2 work early that we started
9 a week earlier than what was on the schedule. When
10 we actually started was actually a week later than
11 when we were hopefully going to be able to start.
12 But we weren't supposed to start until the 18th. We
13 started on the 11th.

14 I'd also like to give credit to the
15 drilling company for getting us through a lot
16 quicker. It was one of the most precision drilling
17 crews that I've ever had the pleasure to work with.

18 ROBLES: They were good.

19 BURIL: They were incredible.

20 ROBLES: In that tight area.

21 GEBERT: The leadman there, he ran that whole
22 drilling rig like a ship's captain.

23 BURIL: I'm sorry to say I've been doing this
24 for almost 20 years and that guy was the best
25 driller I had seen in that time. Just awesome.

1 LOWE: So are there contractual people that you
2 work with that are not giving us enough time or have
3 other things that are priorities for them?

4 ROBLES: There's only one contractual
5 organization here, and that contractual organization
6 does everything on the Lab.

7 BURIL: Virtually everything.

8 LOWE: Would it be of any use for us to write a
9 letter to them saying it's important to get this
10 through, otherwise this isn't going to happen and
11 this is going to be --

12 BURIL: You could write the letter, but I would
13 say that it would probably fall on ears that would
14 be sympathetic but incapable of doing more.

15 ROBLES: Let me put it this way: You write me
16 the letter and I will put a cover letter and make it
17 under one key issue and it will get the response
18 that it needs.

19 LOWE: Okay.

20 ROBLES: Because if there's more contractual
21 delays -- it's going to be a letter saying this will
22 be an award fee issue, your input control on that.
23 That's 18 million that they get. So that's the way
24 to do it.

25 LOWE: Okay.

1 ROBLES: Write it to me and I'll put a cover
2 letter on it and get it to Dr. Stone. Now, if it
3 becomes a big problem, it's going to fall on him and
4 he's going to say "Get the contracting folks to put
5 this on a higher priority." That's the way he's
6 going to have to do it.

7 LOWE: Okay.

8 BISHOP: That sometimes is what it takes.

9 ROBLES: That's sometimes what it takes. That's
10 right.

11 BISHOP: We were having a lot of trouble getting
12 our legal to give us information about a settlement.
13 We just couldn't get it. We were using that money
14 for a contract. Eventually just said, you know,
15 "Just call the EO." They called and that went up to
16 the top of the State Board and we got it in a week,
17 within three months.

18 BURIL: If we can make it work, we'll make it
19 work. An awful lot of that depends on NASA review.
20 I want to make sure you understand that. Oftentimes
21 we expect a week in NASA and it takes a month.

22 NOVELLY: I wouldn't want you to have the
23 impression that the contracting people working on it
24 give it a low priority, because I know the person
25 who is handling this issue is coming in on weekends

1 and evenings.

2 So it's not that it doesn't have a high
3 priority. It's just that they've run into things
4 that they could not have anticipated that were
5 problems. And really, they are working very hard to
6 try to get it through.

7 BURIL: Again, just as an indication, too, the
8 procurement organization here on the Laboratory has
9 shrunk dramatically, I think probably on the order
10 of 30 to 50 percent, in the course of the last 18
11 months. So everyone who is left has got anywhere
12 from a third to twice as much work to do. And that
13 has created an additional impact. It's not a
14 question of priority. It's a question of number of
15 hours in a day.

16 Okay. What do we do with this, then?
17 What's the next step?

18 BISHOP: Well, my suggestion would be to take a
19 look back at this schedule and look back at where
20 completion of the field work was and see if we can
21 move that back. We obviously completed drilling
22 almost two months earlier than expected and we're
23 taking two months off of the sampling. So it should
24 show a dramatic change.

25 BURIL: We had planned on having sampling done

1 twice. And I believe there was a two-month
2 interval?

3 RANDOLPH: That's correct.

4 BURIL: Between the two?

5 RANDOLPH: Right. That's what was required last
6 time.

7 BURIL: Right. Are we desirous of maintaining
8 the interval between those two sampling events as
9 two months?

10 BISHOP: We could talk about that a little bit.
11 I think we need to have more than one sampling
12 event.

13 BURIL: I agree.

14 RANDOLPH: Yes.

15 BISHOP: I don't know that two months is a magic
16 number.

17 BURIL: That was chosen only because that
18 matched what we did before.

19 RANDOLPH: Exactly. It was based upon what we
20 had done previously. And of course, even with the
21 dual oil air percussion, after that first sampling
22 date the two months is arbitrary.

23 BURIL: That's right.

24 RANDOLPH: Right now do we need to wait two
25 months? Do we need to wait two weeks? It's the

1 same decision that we would have had the first time.

2 BURIL: I think there's a point to be made about
3 having enough time between the sampling events that
4 they actually could be viewed as distinct events.

5 RANDOLPH: Exactly.

6 BURIL: What that length of time is, Jon, you
7 folks have had a lot more experience in soil vapor
8 than I've been familiar with. Have you found a,
9 quote, magic formula for that kind of --

10 BISHOP: No. We haven't. To be honest, what
11 we've done a lot is matched groundwater, whatever
12 sampling they were doing with the groundwater. And
13 that's just for convenience. They go in, first they
14 do the groundwater, then they come back in right
15 after that and do the soil gas, or vice versa.

16 BURIL: When we're doing groundwater quarterly,
17 that would actually slow us down.

18 BISHOP: Right. But what I'm saying is there
19 wasn't any number.

20 BURIL: There wasn't any magic way of figuring
21 that out.

22 BISHOP: Right. It was just based on that.

23 I don't see any reason not to change it to
24 a month, you know, to reduce it down. You still
25 have enough time. I agree you want enough time to

1 show a distinct thing.

2 But I wouldn't expect -- actually, this is
3 what I expect: You go out, you're going to take
4 your first set of samples and you're either going to
5 be at a decision point then that you want to get
6 another round of samples to make sure that you
7 believe that before you make a decision, which is
8 are you going to go in and do some vapor extraction,
9 or are you not.

10 BURIL: Right.

11 BISHOP: So I don't think you'd want to wait too
12 long to make that decision. So a month, three
13 weeks.

14 BURIL: I would say no less than a month,
15 myself, only because of the logistics and so forth.

16 How long are we talking about to run a
17 round of soil vapor samples, B.G.?

18 RANDOLPH: Four to four and a half days.

19 BISHOP: You've got four wells. Is that right?

20 RANDOLPH: We have those deep ones and we have
21 the other soil borings, too, which we converted to
22 soil vapor wells. They have five sampling points in
23 each one.

24 BISHOP: My experience has been somewhere
25 between 12 and 15 ports per day.

1 RANDOLPH: We have 55 new ones.

2 BURIL: So you're talking four days, basically.

3 BISHOP: Yes. That's probably what you're
4 talking about.

5 BURIL: So a week.

6 BISHOP: You're talking about a week. Then
7 you're talking about essentially a three-week window
8 between the end of one sampling --

9 BURIL: Beginning of one and the beginning of
10 the next.

11 BISHOP: Would be a month, three weeks.

12 BURIL: Is that doable, B.G.?

13 RANDOLPH: Certainly. We can do it that way.
14 Sure.

15 BURIL: Okay. Let's see if we can do it.

16 RANDOLPH: We do want to have enough time to
17 examine all the chromatographs and review all the
18 data from the first round before we venture into the
19 second round.

20 BURIL: Right.

21 RANDOLPH: And we only have 55 new ones now,
22 instead of 65.

23 BURIL: What I've got, then, is that we'll make
24 that waiting period between sample times as one
25 month start to start.

1 BISHOP: Okay.

2 BURIL: And we'll look at the other stuff as far
3 as moving everything else back a bit. Why don't we
4 take advantage of something else that goes right.

5 Okay. We'll go ahead and look at that,
6 then.

7 If you have any other questions about this
8 particular thing, please feel free to give us a
9 call. We'd like to be sure that you're
10 understanding where everything is at.

11 The OU-2 deliverables, as far as I can
12 recall, and I'm looking at the thing today, are
13 identical to what we gave to you earlier. And
14 Operable Unit 1 has slid around a little bit and
15 it's because of that phasing thing I talked about
16 earlier.

17 LOWE: So likely we'll see these OU-2 dates
18 being moved up by four months each and be getting
19 the first RI report in January?

20 BURIL: That's possible. I want to be sure that
21 we build everything in here. On the surface I'd say
22 that that sounds accurate.

23 LOWE: Okay. Then I think we were looking at
24 the OU-1/OU-3 dates, that the concept of an interim
25 ROD for all phases is still open. I don't know if

1 we were planning to discuss that today or tomorrow.

2 BURIL: Tomorrow.

3 ROBLES: Tomorrow.

4 LOWE: But I think that the high risk for
5 potential delay in OU-1 is another reason why we
6 should really think about separating them and moving
7 OU-3 up.

8 BURIL: I can't argue that. That will be a good
9 topic to figure out how we're going to deal with
10 that tomorrow.

11 LOWE: Okay.

12 BURIL: Any other comments, questions on this?

13 Is anybody interested in seeing that
14 massive bunch of stuff I generate, in detail?

15 LOWE: No.

16 BURIL: No? Good enough. Because it's got more
17 detail in it now than it did before. It went from
18 380 lines to 460.

19 We want to talk a little bit about the
20 groundwater monitoring results that we have from
21 August and September of this past year.

22 Did you guys get this already?

23 NOVELLY: Yes.

24 BISHOP: Yes. Make sure we got the right one.

25 NOVELLY: That was Fed Ex'd out so you guys

1 would be receiving it when you were sitting here at
2 the last RPM meeting.

3 CUTLER: Did you guys get October-November?

4 ROBLES: Yes.

5 GEBERT: Yes.

6 BURIL: So you have August-September and
7 October-November. So you have two of them.

8 NIOU: Yes.

9 BURIL: Basically, I think we just wanted to
10 find out if you had comments, questions, concerns
11 about this.

12 Here is a copy you can share amongst
13 yourselves. We don't ask that you lug it around
14 with you cross country.

15 LOWE: Actually, we all got together and talked
16 about it, and wrote up our thoughts.

17 BURIL: Good.

18 LOWE: I'll pass this around. I'm not
19 absolutely sure that I brought enough copies. I
20 guess I didn't.

21 BISHOP: Do you have page 2?

22 LOWE: I figured we already talked about it.

23 BURIL: So no page 2.

24 BISHOP: Page 2 was just soil vapor, maybe
25 moving up the schedule.

1 Let me just give a quick introduction on
2 this. Because back when we talked, I don't know,
3 maybe it was about six, eight months ago, about the
4 idea of these ongoing monitoring reports, we said
5 what we'll do is when they came out we'd get
6 together and look at them and give you kind of a
7 review on the format and did it fit with what we
8 were thinking of.

9 So that's what we did. We went through
10 the first two documents and tried to look at what we
11 thought was missing or how it could be arranged
12 differently so you'd have some feedback on it.

13 BURIL: Sure.

14 LOWE: The first thing we noticed is that the
15 first groundwater report we got didn't show the
16 detected values on the concentration maps. And we
17 noticed that was corrected in the second report. So
18 we just want to make sure they would continue the
19 way it was on the second report.

20 BURIL: Let me be sure I understand what you're
21 talking about. This is the first one I'm looking
22 at. You're talking about these maps here with the
23 concentration values?

24 CUTLER: On one of the maps, on TCE we just put
25 in everything above an MCL.

1 BURIL: Right. I just want to be sure I
2 understood. We talked about that.

3 CUTLER: There's so many TCEs. I think at the
4 time we thought it would be simpler. People could
5 see where the hot spots are. But we changed our
6 mind on the second event. We put them all on.

7 BURIL: So just continue that, is basically what
8 you're saying?

9 NIOU: Yes.

10 CUTLER: Whereas the other two maps, the
11 detection limit and the MCL is the same. So it's
12 really just one map that that happened.

13 BURIL: Okay.

14 BISHOP: What I'd like to see is that we get
15 contour maps of the contamination by level, depth.
16 Where you think it's a different piece of water,
17 then how are those affected. It's kind of hard to
18 see when you're looking at one of these and you're
19 going, okay, in screen 2 here we have it and in
20 screen 2 here. Are those two screens considered the
21 same water zone --

22 BURIL: I see what you mean.

23 BISHOP: -- or are they not? So are these
24 comparable or not?

25 I know from our discussions in the past,

1 and likely from the discussion this morning, that
2 there are some areas that are considered different
3 water, you know, different zones.

4 BURIL: Discrete.

5 ROBLES: Would you care for another map just
6 having that? Because when you put the contours on
7 that one, it's going to be impossible to read.

8 BISHOP: Right. That's correct. You still need
9 to have a map that shows the values on it so you can
10 skim through. But depending on how many you need,
11 depending on how many discrete zones --

12 BURIL: Let me see if I can paraphrase what I'm
13 hearing and maybe get an idea of what you're looking
14 for. What you're looking for is more of a
15 three-dimensional type of presentation on where the
16 contaminants reside within the water column?

17 BISHOP: Actually, I wasn't considering it three
18 dimensional. What I was considering is that, okay,
19 when you're looking at this data and you want to
20 contour the contamination, or we'd like to see a
21 contour, but we'd like it not to be contoured just
22 in one -- if there's multiple levels of water
23 observed, then there ought to be multiple maps.

24 BURIL: All right.

25 CUTLER: Basically screen level, I think.

1 Almost slices through the aquifer.

2 BISHOP: Right, where it makes sense. If you've
3 got two zones that are really the same water zone,
4 then --

5 CUTLER: You'll find it's not that easy because
6 our screens are scattered everywhere and there will
7 be some interpretation.

8 BISHOP: Yes. There has to be some
9 interpretation.

10 CUTLER: Pick a point.

11 BISHOP: And say that for the most part this
12 water is there.

13 CUTLER: What we're hoping to do is get a
14 database program and get it on one diagram kind of
15 like you've seen on an amoeba plot and you can see
16 it.

17 BURIL: I understand what you're looking for. I
18 can say we can give it to you. I just don't know
19 how fast we're going to be able to give it to you.
20 There's a number of ways you can do this. The first
21 is, like you described, taking slices through the
22 aquifer and doing it like that. That's doable.

23 Currently I don't think we have the
24 computer sophistication in our database to be able
25 to allow us to do that without a fair amount of

1 interpretation by hand. That is doable. I just
2 don't know how long it will take us to get that set
3 up.

4 The other aspect is that I just instructed
5 Mark to develop a cost and proposal for implementing
6 a new program that we've seen here in the last few
7 months, and it's put together by the same folks that
8 are doing our computer modeling. It's basically
9 almost like a GIS kind of approach to this, but
10 gives them an ability to actually plot plumes in two
11 dimension or three dimension. You can slice, like
12 what you're talking about. You can take an
13 isometric view of the thing, if you will, like a
14 block and see where it's at. A variety of things
15 like that.

16 At some point in time, if we're all
17 comfortable, we can even factor in different aspects
18 from the computer model itself and it will tell us
19 which direction the water happens to be flowing, and
20 so on. There's a lot of flexibility with this. But
21 we're at the point in time where we're just coming
22 to that kind of capability because we're working on
23 our computer model first.

24 BISHOP: What we've done in other sites is take
25 a look at it and start making some generalizations.

1 You know, you've got from the water level down to
2 150 feet is essentially -- we're going to call the
3 first zone, and from 150 feet to 340 is the second
4 zone, and so on. And whatever screens fall into
5 those zones, you use those. If you have multiple
6 screens, you use the highest. You just make some
7 assumptions so you can look at the information over
8 time. Because when you look at -- it's much easier
9 to look at multiple contours over time to see if
10 you're seeing any change than it is to try to
11 compare numbers over time.

12 ROBLES: May I make a suggestion? I have a
13 problem in that if we do it and we keep changing it,
14 you want to get a contour and say, well, that's not
15 right, we want to change it around, we're going to
16 have different maps in different books.

17 BISHOP: I wouldn't suggest continually changing
18 it around. I would suggest picking a simplification
19 approach and using that.

20 Now, that doesn't mean that you can't in
21 the future, if you feel like you've got a better --

22 ROBLES: Refine it.

23 BISHOP: -- zone, say this is our initial
24 simplification, what we've done now is we've used
25 this 3-D component and now we can get a better feel

1 for it.

2 ROBLES: May I make a suggestion that we have
3 kind of a planning meeting all together and that our
4 technical experts present it and we all come to a
5 consensus together?

6 BISHOP: Sure.

7 ROBLES: Instead of us making a decision in a
8 vacuum and then, oh, wait a minute, this needs to
9 be -- so that we come all together and then say,
10 hey, look, this is the data, what do we think as a
11 generalization, what's the best generalization that
12 will satisfy our need.

13 That, I think, is much better because then
14 we all have a buy into it. We can all see it and we
15 can all discuss it and say, well, maybe this way or
16 that way, and we all come to a consensus, instead of
17 us doing it, then you coming back, "No, I don't
18 think that's a good generalization."

19 BISHOP: Yes. I think that's a great idea.

20 BURIL: Not play "bring me a rock."

21 LOWE: Can we do that at the next RPM meeting,
22 or is that too soon?

23 CUTLER: We could probably try to get a lot of
24 this in in the next quarterly event. Well, it's due
25 the end of this month.

1 BURIL: I was going to say don't really chop
2 yourself off there, Mark, because your next
3 quarterly event is due in two weeks.

4 CUTLER: It wouldn't take much to do some of
5 this. If you want us to delay this report to
6 include some of that or if you want to catch it on
7 the next event --

8 ROBLES: I'd rather that you do the event and
9 then gather the data to have a meeting and then
10 bring it in the next one.

11 CUTLER: Whatever you guys want to do.

12 BURIL: My immediate suggestion is let's stick
13 with what we have in terms of schedule. We're
14 supposed to supply you a third long-term groundwater
15 sampling event the end of this month. I would say
16 let's give what we have to you.

17 ROBLES: Right.

18 BURIL: Then based on the discussion we're
19 having today, we could take data from that and
20 develop some of these thoughts that you're talking
21 about, sit down in a meeting, talk about it and
22 determine at that point if these things are suitable
23 and that's what you're looking for. We could either
24 incorporate it into the next report or, in addition
25 to that, backtrack and include it in the third

1 report.

2 BISHOP: I think that's fine. I'd like to make
3 one other modification to it, which is after we go
4 through this, let's just put them up on the board
5 and look at the ones that require interpretation
6 that we should get together and have an agreed upon
7 interpretation. Some of these are just changes,
8 modifications to the format, which are not
9 interpretive.

10 BURIL: Yes.

11 ROBLES: Yes.

12 BISHOP: Those, I think, you should include.

13 BURIL: Yes. That's not a problem.

14 BISHOP: Let's make sure we agree on what those
15 are so we're ready.

16 BURIL: Yes. That's fine.

17 GEBERT: Okay. Ready to go on to number 3?

18 ROBLES: Yes.

19 GEBERT: Number 3, we feel you should include a
20 map showing the PCE concentrations. I don't know if
21 you have detectable limits there. I think they're
22 under the MCLs on site.

23 BURIL: Did we not do that on a subsequent
24 report?

25 GEBERT: No.

1 CUTLER: When we picked out all the VOCs we
2 detected, and there's maybe 10, we just picked the
3 ones above MCLs.

4 BISHOP: The reason that we're concerned about
5 this is that some of the off-site wells show high
6 levels of PCE, but we're not seeing any of that
7 information. It makes it hard to see if there's a
8 trend changing over time.

9 ROBLES: It also gives us an idea of off-site
10 contamination.

11 BURIL: I don't see that as a problem. I think
12 whatever presentation we make we'll end up
13 discussing.

14 ROBLES: If we're going to argue one way or
15 another we'll need that to be shown.

16 BURIL: Number 4 makes me want to just ask a
17 question. Is this a suggestion in terms of future
18 reports, or are we providing you 8 1/2 by 11 maps?

19 BISHOP: The first one, August and September,
20 were 11 by 17. The next ones were 8 1/2 by 11.

21 BURIL: They were?

22 Go back to 11 by 17.

23 CUTLER: It's not quite a straight reduction.
24 The location of the site that has the wells we do
25 update 8 1/2 by 11. So it's actually larger than

1 what you see there.

2 BISHOP: You centered in and blew it up.

3 CUTLER: Right. Because there is a lot of stuff
4 on that map, upgradient to the south and to the
5 east, that there's no data. But we can go back to
6 that.

7 LOWE: That kind of ties in with number 5.

8 BURIL: Can I clarify one aspect of this?

9 In looking at this map, does this show in
10 the scale and degree of complexity or simplicity,
11 however you want to view it, the kind of information
12 that you're looking for, aside from the contours?

13 BISHOP: With some additions we have not --

14 BURIL: That you haven't talked to yet. Okay.

15 BISHOP: Right.

16 CUTLER: Here is this. Let's take a quick look.

17 We've also improved these 8 1/2 by 11s.
18 We had them scanned and digitized. But that's
19 basically -- so that actually might be a larger
20 scale than that for the site even though it's an
21 8 1/2 by 11. Does that make sense?

22 BISHOP: Yes. I know what you're saying.

23 BURIL: Let's settle one part of this. Which
24 size do you prefer? This or this? I'm hearing
25 this, based on what I'm seeing here.

1 BISHOP: Yes.

2 BURIL: 8 1/2 by 11.

3 GEBERT: Yes.

4 BURIL: So you would prefer to see this scaled
5 up to 8 1/2 by 11 and incorporate whatever
6 additional data that you have that we have yet to
7 talk about or what we've already talked about here.

8 BISHOP: 11 by 17.

9 CUTLER: Or do you want that with the off-site
10 wells? See, that's trimmed off some of these
11 off-site wells so we can blow it up.

12 BISHOP: I think when we get down to the next
13 one there are some off-site wells that we would like
14 to see information on.

15 CUTLER: No problem.

16 BISHOP: It might mean that you have to go back
17 to a smaller --

18 LOWE: Something more like this.

19 CUTLER: We did digitize everything knowing that
20 some day we would want that.

21 BISHOP: Great.

22 GEBERT: So this ties in to number 5, exactly
23 what we were talking about in the previous two, that
24 we'd like to see you include the most recent values
25 from the water supply wells, the off-site water

1 supply wells. I think that would make it much more
2 readable if you go back to the 11 by 17 size.

3 LOWE: We want to see this on a concentration
4 map. I don't know that it would make sense to try
5 and contour, talking about different screens --

6 BURIL: I was just going to make that point.
7 Because the production wells screen essentially the
8 entire length it's going to make it very difficult.

9 LOWE: Right. But what I think would be
10 interesting to look at is if you're getting really
11 high concentrations, for example, if you're getting
12 really high concentrations in your water supply
13 wells and then everything in your multi-port wells
14 is lower than that, you need to stop and say, "Hey,
15 what's going on here?" That's the kind of picture
16 that I want to see in this map.

17 BURIL: I don't see a problem with this, with
18 one caveat, and that is if the water purveyors are
19 willing to provide us with this information in a
20 timely fashion that allows us to meet schedule. We
21 have had situations where certain water purveyors
22 have been recalcitrant in providing this
23 information.

24 GEBERT: At the Raymond Basin meeting that we
25 attended last month, my sense of that was that they

1 were very willing to share any data that they had
2 with you, and in a timely manner. That's the
3 distinct impression I got from that meeting.

4 BURIL: That's fine. I'll simply qualify what
5 I've said, is that we have asked now for about the
6 last year and a half from Lincoln Avenue Water
7 Company for information exactly such as you're
8 describing. Our latest information is from 1995.

9 ROBLES: The last meeting that we've had with
10 the Raymond Basin and Monk Hill, since they feel
11 they're now having input, since we're going to be
12 impacting them, Lincoln Avenue has taken the
13 position they're going to keep their mouth shut as a
14 team player.

15 BURIL: That would be interesting.

16 ROBLES: So we need to go through Palmer, ask
17 Palmer to get all of the Monk Hill and Lincoln
18 Avenue data and go through the Monk Hill and Raymond
19 Basin folks and they will give it to us. You can
20 also put the pressure.

21 BISHOP: Give us a call because we'll also add
22 it. But I don't think you should delay. If you
23 don't have it for one well you could put the most
24 recent data and you put the date on it.

25 ROBLES: That's the key. If we don't have it,

1 we can't put it in. If we have it, we'll put it in.

2 BISHOP: But we are more than happy -- they led
3 us to believe, as Richard said, they wanted to
4 provide the data. If they're giving you any
5 problems, let us know, so we can say "Hey."

6 BURIL: That's fine. Who is going to take
7 number 6?

8 GEBERT: I'll take number 6.

9 As we know, tributyl tin was detected, I
10 think, in the first screen of Well 12, MW-12, in the
11 August-September report and it was not detected, or
12 it was not sampled in the October-November report
13 because -- unable to get a sample because the water
14 level had dropped from that screen.

15 We would like you to extend the testing
16 for tributyl tin to the top two screens of MW-4 and
17 MW-8 so we can get more of a handle on where it
18 might have migrated.

19 BISHOP: If that makes sense. We looked at it.
20 What seems to be the closest wells per our
21 discussion about sampling for tributyl tin last
22 year?

23 CUTLER: We do have a little more information.
24 Shall we tell them about this?

25 BURIL: Absolutely. Go ahead.

1 CUTLER: We re-sampled Well 12 this last round,
2 the February-March, and it was nondetect. The first
3 round, the August-September round, water levels were
4 getting low. And the upper screen in Well 12 we had
5 real high turbidity. We had turbidity of 50.
6 Typically we were below 5, occasionally 5 and 10.
7 Typically we're below 5. We're down in -- the
8 detection is 5 parts per trillion and we had the
9 highest turbidity detect there we've had in years
10 out here. We had the lab check on it, go back. We
11 had reanalyzed it, see if there's any matrix
12 interference. You get down to those low levels, it
13 won't take much.

14 The lab said nothing was wrong. I still
15 think turbidity might have played a role in it.
16 This last time, turbidity was fine. So I don't know
17 if that will play any role.

18 BURIL: I think one of the things, too, that I
19 would like to look to is what is the level of
20 concern. In other words, at what concentration does
21 tributyl tin become a concern from a regulatory
22 standpoint? I know the PRGs would be a way to
23 recognize that. If we're talking orders of
24 magnitude difference between the level of concern
25 and what we're seeing, we may not need to continue

1 on.

2 BISHOP: My concern is that we agreed to sample
3 the most likely spot to see if we saw anything.

4 BURIL: Right.

5 BISHOP: And we did.

6 BURIL: We've done it twice, as we agreed.

7 BISHOP: So what we wanted to make sure is that
8 it is of no concern.

9 BURIL: That's fine. That's what I'm trying to
10 identify now, is what level should we be concerned
11 with. We've sampled it twice. One was extremely
12 close to detection limit with a high turbidity. One
13 was, quote, acceptable turbidity and nondetect.

14 Are we at the point of making the decision
15 that we don't have an issue?

16 GEBERT: I would think not.

17 BURIL: On what basis? I'm just trying to
18 understand.

19 GEBERT: On the basis it was detected and
20 there's no evidence that it has not gone beyond
21 MW-12.

22 BURIL: Let's find out, if we could, what we're
23 dealing with in terms of the level here. Because if
24 the level is very low, then I would say you're
25 right. But if the level is an order of magnitude or

1 higher above what we're detecting, it seems like
2 we're chasing phantoms potentially. That's why I
3 want to try to understand.

4 LOWE: What is --

5 CUTLER: I think it's microgram per liter.

6 BURIL: It's part per billion.

7 BISHOP: So we're talking about 1 part per
8 billion here. We're talking about a detect that --

9 BURIL: 3 parts per trillion.

10 CUTLER: 5.

11 BURIL: Excuse me. 5. So we're almost
12 literally a thousand times less concentrated than
13 the level of concern. From my perspective, that
14 seems to be a pretty good factor of safety,
15 particularly since one doesn't show anything at all.

16 BISHOP: I would agree with you if we felt
17 confident that that's the only place. I'm not
18 really pushing all that hard we should retest
19 tributyl tin. But I do think we should all look
20 back at what we agreed, which was if we found it, we
21 would expand the scope of the testing.

22 LOWE: Is it low because it's mobile and it was
23 released and it was there and it's pretty much moved
24 on and you might have concentrations in other nearby
25 wells?

1 BURIL: Myself, I have a technical concern with
2 the idea of looking for something that was extremely
3 close to a detection limit of parts per trillion and
4 below a detection limit on a subsequent sample at
5 one location, recognizing that the levels of concern
6 are three orders of magnitude higher than what we're
7 dealing with.

8 If it was there and it's gone now, in all
9 honesty, it doesn't really make much difference
10 because it's not there now. There's nothing we're
11 going to do about it. So I'm trying to understand
12 what rational basis we have other than the fact that
13 we found it, which we found it in concentrations
14 that, in my opinion, are low enough that they aren't
15 an issue.

16 BISHOP: But we only looked in one place and we
17 found it there. You have a different issue.

18 BURIL: You're saying we haven't looked in
19 enough places. I'm saying we looked at where we
20 said and it's not high enough to be a concern. So
21 you've got a different issue there, Jon. You're
22 saying we haven't looked in enough places.

23 BISHOP: Wait. Wait a second. What we said was
24 we agreed to limit the scope of where we looked.

25 BURIL: And we did.

1 BISHOP: And we did. With the understanding
2 that if we found it, we'd expand that to see if it
3 was a pervasive problem or not.

4 GEBERT: Was there any concentration level put
5 on if it was found or not? I don't know. I wasn't
6 present.

7 BURIL: I think there's a reasonable point of
8 professional judgment that says if it's a thousand
9 times less than the level of concern, you can
10 reasonably assume it's not going to be a concern. I
11 mean, if this was a 2 or 3 part per billion issue
12 and you had 3 parts per billion as a level, then I'd
13 say absolutely, you've got a concern. But I mean,
14 we're talking orders of magnitude difference.

15 If Peter is willing to go ahead and expand
16 the investigation for tributyl tin, that's fine.
17 But I want to be sure that we understand that we're
18 looking for something that I personally believe is a
19 phantom.

20 ROBLES: What do you guys want to look at? How
21 many more samples do you want?

22 BISHOP: We wanted to discuss --

23 GEBERT: Include it in the next round of
24 sampling.

25 ROBLES: On just those two wells?

1 GEBERT: Just those two wells.

2 CUTLER: Not 12 and 13 again? Or just add these
3 three samples?

4 GEBERT: Add the two.

5 CUTLER: It looks like it's two screens to 4 and
6 then Well 8. That would be three.

7 RANDOLPH: MW-8. So six. The standpipe well.

8 CUTLER: So that would be one sample for MW-8
9 and two samples for MW-4. You're saying add three
10 samples.

11 GEBERT: Right. To the next round of quarterly
12 sampling.

13 And if we see nothing, then --

14 BURIL: Let's caveat what we mean by "nothing,"
15 then, because I have a concern about what level of
16 detection.

17 ROBLES: If we see the same levels that is three
18 orders of magnitude below the MCL levels, does that
19 still satisfy? Or will we still need to continue
20 sampling?

21 BISHOP: We'd have to talk about that.

22 GEBERT: At that point I would have to talk -- I
23 don't want to say right now. I'd have to talk to my
24 toxicologist.

25 ROBLES: To be honest with you, I personally

1 don't have a problem with the sampling. I'm
2 concerned with the discussion that it is because
3 it's three orders of magnitude below MCL levels that
4 we're still going to be looking for it, even if we
5 find it, if we don't find nondetects.

6 BURIL: That's what concerns me.

7 BISHOP: What concerned me, and this is the only
8 reason why, is that the discussion was that they
9 couldn't possibly be here on site. That was the
10 reason why we weren't going to find it. So why are
11 we looking for it? If we find it now, well, now
12 it's just too low. So it was possibly on site.
13 Maybe it was on site in higher levels. We've never
14 looked for it anywhere else but right here. That's
15 where I get concerned.

16 BURIL: I can understand Peter's point. I don't
17 personally have a problem with trying to address
18 your concern. I think that, okay, it's not that
19 expensive, it's not that big a deal. But in terms
20 of the impact overall to the way that we're
21 approaching this thing, and if we're finding levels
22 that are in the part per trillion level and that the
23 PEGs are saying you don't have concern levels until
24 you start hitting into the part per billion, a
25 thousandfold factor, that we as reasonable

1 environmental professionals can say this isn't a
2 problem. If we're all in agreement that we can do
3 that, then I would say to continue on.

4 But if we find 2 parts per trillion again
5 in another well, then I'd say, well, hold on a
6 minute. I don't think we still have a problem here.
7 I think we're still seeing what could be potentially
8 turbidity or some other kind of phantom. I don't
9 know what. But the fact we have that thousandfold
10 difference between our concentration and a level of
11 concern gives me enough confidence to say this
12 shouldn't be a problem for us.

13 ROBLES: What I think right now is we're not
14 going to come to an agreement on that line. I think
15 we all agree we should sample.

16 BURIL: I'm not arguing with that. We should
17 sample.

18 ROBLES: We should sample according to what they
19 requested. Then we'll cross that bridge. When they
20 get there we need to look at it because if we
21 continue to see that low level, what does that mean?
22 I'm concerned about what that means.

23 But right now the sampling issue is moot.
24 We'll go sample it, but the key question, I think we
25 may need to talk about this. Because if we find

1 other kinds of chemicals at below MCL levels, what
2 are we going to do?

3 BISHOP: I don't think that we've pushed on
4 VOCs. We found an issue of concern. This was one
5 that sat kind of in a different situation.

6 ROBLES: Okay.

7 BURIL: Mark, do you have that written in to
8 include this in the next go-round? Next go-round is
9 starting with the field work when? What, two weeks?

10 CUTLER: We're thinking May, depending on the
11 VOCs. As soon as -- we're ready to go.

12 BURIL: Where are we at? Number 7? That's a
13 given. We can do that.

14 BISHOP: It's just a way, when you're flipping
15 through the book, to see where those are.

16 BURIL: Number 8 is a no brainer. That's no
17 problem.

18 Number 9. We actually have some of that.

19 LOWE: Do you have something for me today?

20 BURIL: Not to hand you on a piece of paper, but
21 we talked about it.

22 CUTLER: I have a copy of what we sent. I sent
23 you something a couple weeks ago. I don't know
24 what you guys thought of it.

25 BURIL: I thought it was fine. I don't know if

1 Peter wants to look at it ahead of time.

2 ROBLES: If you feel comfortable, give it to
3 them.

4 BURIL: Do you have it handy?

5 CUTLER: I have a copy that we sent.

6 ROBLES: Give it to them.

7 BURIL: Give it to them.

8 LOWE: Great.

9 CUTLER: We'll have to make a copy of it.

10 ROBLES: Appendix D, number 10. What does that
11 mean?

12 GEBERT: That was the, shall I say, the
13 readability of Appendix D. We found it kind of
14 difficult to locate certain things that we were
15 looking for in the appendix.

16 CUTLER: So do we. That's a problem because we
17 sampled in not a well order. We don't go from well
18 1, then to 3, to 4, to 5. We tend to go off site,
19 we do those, go on site. Sometimes we'll have a
20 separate crew do the shallow wells while somebody
21 else is doing deep wells.

22 BISHOP: We had a suggestion on how to organize
23 it that might make it easier for everyone.

24 CUTLER: Okay.

25 BISHOP: Right now what we have is chronological

1 order, essentially. Right? When they receive the
2 QA samples?

3 CUTLER: I think what we did -- it might have
4 been chronological or by batch number.

5 BISHOP: Or by batch number. What we were
6 considering looking at is these are -- if we do them
7 by well so that right now what we've got is we've
8 got the sample ID, then we go back to the
9 cross-reference and figure out what sample that is,
10 what well that's supposed to be for.

11 BURIL: Let me ask a question. This is
12 something that kind of concerns me from a QA/QC
13 standpoint. These are all provided by Montgomery
14 Labs, you can see.

15 BISHOP: Right.

16 BURIL: These samples are totally blind to these
17 guys. They don't know what well it is, and they
18 never will, if I had my way about it. To do what
19 you're talking about would either require us to
20 divulge which wells are these things or retype these
21 things ourselves.

22 BISHOP: No. What it requires, actually, is
23 just putting a tab that says this well and putting
24 it for that well.

25 BURIL: Oh.

1 GEBERT: Reorganizing the papers in a different
2 order in the appendix. That's all we're saying.

3 BURIL: Okay.

4 BISHOP: Does that make sense?

5 GEBERT: So you would have all the results from
6 MW-2 and then all the results from MW-3 after you
7 receive them from the lab, when you put it in the
8 report.

9 BURIL: I see.

10 BISHOP: That's how you would --

11 CUTLER: The only problem with that, it would be
12 extra work. But each batch has its own QA/QC
13 samples and they report it by batch. Say in one day
14 we've done 1, 9 and 15 because they're all right
15 there. We would have to take out the QA/QC for that
16 report, duplicate it two other times to put it with
17 Wells 9, 1 and 15.

18 NOVELLY: Maybe we could have the QA/QC in a
19 separate section and just have a reference letter or
20 something to go with it. So on the lab report,
21 before you take it apart, you would put a letter A
22 at the bottom and then they would know where to find
23 the QA/QC that goes with that package.

24 CUTLER: We could do something like that.

25 The other problem is for that one day of

1 sampling, we will have, say, one trip blank or one
2 equipment blank. And that goes to those three
3 wells. So it's not quite as easy.

4 BISHOP: Maybe another approach is you've got
5 Wells 1, 2 and 3 that you've done, or 1, 5 and 3 you
6 do on day one. You tab it this is well 1, this is
7 well 5, this is well 3. They may not be in the well
8 order 1 through 23 in order because those three are
9 together, and then you have the QA that goes with
10 it, or however you batch them. But right now it's
11 impossible to find anything.

12 ROBLES: So you basically want one tab. You
13 want to see well 1 tab.

14 BURIL: You want to know if you flip to this tab
15 you're going to find Wells 1, 3 and 5 with its QA
16 and you don't want to flip through everything else
17 to find it.

18 BISHOP: That's right.

19 CUTLER: At the beginning we could have an
20 index --

21 BISHOP: Of what these --

22 CUTLER: -- of what's in these tabs.

23 BISHOP: Because right now --

24 CUTLER: You keep the batches together.

25 GEBERT: That would be fine if that makes it a

1 lot easier for you.

2 BURIL: That does make it a lot easier.

3 GEBERT: All we're asking for is --

4 BISHOP: Add the cross-reference with those.

5 BURIL: Okay. When I first heard what you were
6 saying, I thought you were asking for give us Well
7 MW-1 with all the analytical stuff, then MW-2 with
8 all the analytical stuff. And I thought, gee, if we
9 do that we're going to have to tell them which well
10 it is.

11 GEBERT: No.

12 BISHOP: No.

13 BURIL: That's really what we don't want to do.

14 Okay. That makes sense.

15 ROBLES: Page 4, QA/QC. That's what that was.

16 10. Okay.

17 11. It is recommended that the report
18 provide all historical groundwater sampling data in
19 a table.

20 BURIL: No, I don't think we dealt with that.

21 ROBLES: Spiking.

22 BURIL: We got that, but I don't think we got
23 this. We didn't get the top section, page 4.

24 ROBLES: Page 4 of QC report.

25 LOWE: Mark, you had called me with the answer

1 to that question. Do you want to just repeat it for
2 everybody?

3 CUTLER: The lab can detect at well below 4
4 micrograms per liter. For QA/QC it's not a problem
5 to have that spiking level because they can do their
6 tests. The State of California apparently, I don't
7 know if it demands or recommends using a detection
8 limit of 5 or a reporting limit of 5 for MTBE.
9 Because apparently once it gets into a lab, it can
10 get it everywhere. So what the lab told us is the
11 State has said put a reporting limit of 5 on it, I
12 don't want to see all these scattered little hits.
13 It's kind of like acetone that pops up everywhere.
14 So for QA/QC a spiking level of 4 is perfectly fine.

15 LOWE: How low can they get it?

16 CUTLER: I don't know. I don't know exactly.
17 We can find out.

18 LOWE: When I asked about this, I was told that
19 your spike concentrations should be at the midpoint
20 of your calibration range. So I don't know if
21 that's what 4 is, if your calibration is --

22 CUTLER: In case your matrix spike goes up or
23 down, your interference makes it go up or down. You
24 want to be right in the middle. I could find out.

25 LOWE: Okay.

1 BURIL: I'll make a note of that. Let's find
2 out.

3 CUTLER: Everything else is about .5.

4 BURIL: So we're up to number 11. Are you sure
5 you want all that in every report? You can have it.

6 BISHOP: Right.

7 BURIL: It's an awful lot of stuff.

8 BISHOP: What I was thinking was that we put one
9 table together -- let me find the table here of what
10 I was trying to do. Okay. That's got either by the
11 constituent and then the well or by the -- which is
12 kind of like this. And you would have the dates
13 down. So that you can actually look if there's a
14 change in --

15 CUTLER: Okay. What we've been doing -- of
16 course, you don't have the third event. I just gave
17 you some tables. For this long-term monitoring
18 we're doing that. If you're looking at
19 October-November it has the two events. If you look
20 in the next report, it has the first three events.

21 NIOU: True.

22 CUTLER: But we do have the historical data
23 we've taken for the last several years. If you want
24 that in there, we can do it. But we are building
25 these tables.

1 BISHOP: So it increases in time? Maybe I just
2 missed it in the next one. Because what we were
3 thinking was that as you take samples from these
4 wells, you increase that.

5 CUTLER: We want the same table for the same
6 reason, so we're making it. But we just started
7 with this long-term.

8 BISHOP: Have you seen that?

9 BURIL: I was just going to ask him to find it
10 because I haven't seen it.

11 CUTLER: It's right here in Table 3-2. You have
12 the layered version that has all three events.
13 You'll see April.

14 BURIL: All right. Here you go.

15 CUTLER: But if you want all the historical
16 data, we can do that, kind of the pre-RI data.

17 BISHOP: There we go. So we've got the two
18 sampling events for the same screen.

19 I mean, this is what I had in mind. I
20 don't know if that's what you --

21 NIOU: I would like to see something a little
22 bit more concise. Of course, this is very concise.
23 Remember, this is what you saw in San Francisco.
24 Somewhere in between, so that we won't be flipping
25 to other pages. We can simply compare in one or two

1 pages. Something like that.

2 BURIL: What is the WS? Are these soil vapor
3 concentrations?

4 NIOU: No. Well 3, MW-3, screen 1, screen 2.

5 BURIL: Oh, I see. Well 3, screen 1.

6 NIOU: Yes. Something like this, so to
7 minimize --

8 BURIL: This is just a slightly different
9 configuration.

10 NIOU: Yes. It doesn't have to be this. Just
11 so we don't have to flip 12 pages to find
12 everything.

13 CUTLER: Whatever you guys want.

14 BURIL: If you can come up with a format where
15 you're not going to flip through a number of pages
16 to see everything, we'd be happy to give it to you.
17 But the amount of data we have, we're not going to
18 be able to get everything on one page.

19 NIOU: Of course. We understand that.

20 CUTLER: We have tables like this that we use,
21 but it's for historical for the last several years
22 for carbon tet, wherever you see carbon tet. They
23 are helpful. If you'd like to see those, we can do
24 those easily as well.

25 BURIL: We're more than happy to put it in any

1 format you like. We just would like to be sure we
2 know what that is and we can give it to you.

3 How about the one that Mark showed you in
4 here? Is this approximating what you're looking
5 for?

6 BISHOP: Yes, it is.

7 BURIL: We'll continue on with that, then.

8 CUTLER: You'll see that in a few weeks.

9 BURIL: 12.

10 LOWE: I would be interested in taking split
11 samples, of course, on facility and off facility
12 groundwater at some point in the future. I don't
13 know that I'm planning to do this for the next
14 sampling event. But I think it will give us more
15 confidence in your data, you more confidence in your
16 data, the public more confidence in your data to do
17 something like this. It's something we've done at a
18 number of our other military bases.

19 BURIL: That's not a problem. The only thing
20 that I will caution you is that when you're dealing
21 with the multi-port wells it is not a simple process
22 because we only get a small volume of water out of
23 the ground on each sampling run. So if we double
24 the amount of volume we're taking out we're going to
25 end up out there for, instead of a week for a given

1 area, we're going to be there for two weeks. So
2 just be aware.

3 LOWE: Okay.

4 BISHOP: I wouldn't expect to take them in every
5 screen in every well.

6 LOWE: We wouldn't take split samples on every
7 single well. We just need a couple key ones.

8 BURIL: All of the standpipe wells, those are
9 pretty much point the hose and fill the bottle.
10 Those are real easy.

11 CUTLER: 30 seconds.

12 LOWE: We probably would want to do a little bit
13 of both.

14 CUTLER: Sure.

15 BURIL: Sure.

16 Number 13, to my knowledge, has been done.

17 LOWE: My spell check wasn't working when I
18 left.

19 BURIL: Those should actually be there. Kim has
20 delivered these, I assume.

21 NOVELLY: Yes.

22 BURIL: So that's done.

23 NIOU: I have a curious question. Well 21,
24 MW-21, screen 1, on September of '96 suddenly show
25 up 33, but previous was all ND. However, well

1 MW-20, screen number 1 was previous, at that level,
2 suddenly ND. I was wondering, is there any
3 explanation?

4 BURIL: I didn't follow your question, Stephen.

5 NIOU: Let me say again.

6 Well 21, screen 1. You look at 21, screen
7 1.

8 CUTLER: That's TCE. Right?

9 NIOU: Yes.

10 CUTLER: It's 33. Okay.

11 NIOU: 20 and 21. Both screen number 1.

12 ROBLES: 20 and 21, screen 1. It was 35 and
13 then nondetect. Then it was nondetect and then 33.

14 CUTLER: I don't know. I mean, they're at
15 opposite ends.

16 BURIL: Off the top, I would say that that is a
17 typo. Well 20 has not had any detects of that level
18 that I'm aware of.

19 NIOU: That's why I'm curious.

20 CUTLER: I would question this data here back in
21 July and January. That was part of the --

22 BURIL: If we saw detects in Well 20 to the
23 level that you're looking at there, I would say we
24 have more work to do in Operating Unit 3.

25 NIOU: That's why I'm curious.

1 BURIL: I think those must be typos. I
2 apologize for the confusion.

3 NIOU: No problem. Just a question.

4 CUTLER: I don't know where those numbers came
5 from. Here is a table of all the old data, and
6 there's nondetects in those two screens of Well 20.

7 I think you have a copy of this table.
8 We've given this out two or three meetings ago.

9 BISHOP: Yes. I remember that. Are you finding
10 it there, Stephen?

11 NIOU: I'm trying to read again. Go ahead. Go
12 and discuss. I'll try to find it.

13 BURIL: I was just going to clarify that we've
14 covered all the things that you wanted to regarding
15 the report. I think we heard you on all of them.

16 BISHOP: Could we kind of just go through by
17 numbers and see what makes sense to implement and
18 what doesn't, what makes sense to discuss at the
19 next RPM meeting? I know that --

20 LOWE: Or on the next conference call.

21 BISHOP: Or the next conference call, which of
22 course I won't be on.

23 ROBLES: 2 is definitely the one that we want to
24 discuss.

25 BISHOP: Right.

1 BURIL: 2 is for discussion.

2 BISHOP: I think that makes sense.

3 LOWE: It's a discussion of how to do it, not
4 whether or not to do it.

5 ROBLES: Right.

6 BURIL: Yes.

7 ROBLES: Do you want to include Appendix D?

8 BURIL: We can do that, sure. I'm just
9 thinking.

10 I don't know if we'll have an example that
11 we could show them on an Appendix D as rapidly as
12 our next conference call. Maybe we could give them
13 the idea. I'm just thinking we've got all these
14 other things that we're trying to get squared away
15 that personally I believe are higher priority, like
16 getting the field work on OU-1. We'll at least have
17 a suggestion of how we can pull this together. If
18 we can actually have a sample, we'll get it off to
19 you.

20 BURIL: Okay.

21 CUTLER: Do you want some of this retroactive?
22 These first two reports, do you want them tabbed?

23 BISHOP: No.

24 LOWE: No.

25 CUTLER: Thanks.

1 BISHOP: I think we agreed when we started this
2 we would try and take the first couple and try and
3 refine it and not try and go back and make them
4 perfect.

5 BURIL: Right. That's good. We appreciate
6 that.

7 BISHOP: My understanding would be, then, the
8 rest of these items will be in the next one that's
9 in two weeks?

10 BURIL: No.

11 CUTLER: If you give us another week we can give
12 you most the recent.

13 BURIL: VOC concentration maps with most recent
14 values at water supply wells, I don't think we can
15 generate that fast enough to be able to get in for
16 this next one. I would say that the following one,
17 with no problem at all, for all of them.

18 ROBLES: Right.

19 BURIL: We can add in as much of these as we
20 can, but given the fact that we're only two weeks
21 away from the next one, that next one might be
22 something of a transition.

23 ROBLES: Can we say we'll try as best as we can
24 to fulfill as many of these in this report and if we
25 can't, we'll definitely get it by the next report.

1 Is that acceptable?

2 GEBERT: That would be fine.

3 BISHOP: Fine.

4 BURIL: Okay. Sounds easy.

5 You have a copy of this thing. Right,
6 Mark?

7 CUTLER: Yes.

8 ROBLES: I've got one thing. May 30th, 31st and
9 June 1st Edwards Air Force Base is hosting an
10 environmental training conference for their RABs.

11 GEBERT: Excuse me. RABs?

12 BURIL: Remedial Action Board.

13 LOWE: Restoration Advisory Board.

14 ROBLES: Restoration Advisory Board. They're
15 both the same. They call them different things.

16 They're also bringing their technical
17 people to talk about how they're doing their
18 Superfund program up there, which they are
19 accelerating.

20 I have three slots. Anybody who wants to
21 go there, it's free. I would like one of our people
22 to go, myself, and one of the regulators to go who
23 wants to. It is at the Antelope Valley Inn
24 Thursday, Friday and Saturday. I can get more
25 information. And it's something that I'd like one

1 regulator to be able to go, because what they're
2 doing is they're breaking new ground regulatorily in
3 the way they're implementing Superfund. I want to
4 see if there's something we could utilize here to
5 accelerate the process, because they're getting
6 approvals from Sacramento very fast on some things.

7 GEBERT: Who specifically in Sacramento? The
8 OMF?

9 ROBLES: Yes. I think they're going to be down
10 there as well. When I get the information, I will
11 pass it to Chuck to give to all three of you guys.
12 But it's something that you guys want to attend, or
13 even attend one day, because they will have topics
14 on that.

15 BURIL: Moving on beyond the agenda here just
16 for a second. This is a copy of the agenda for our
17 meeting tomorrow, so that you have that. I'll give
18 that to you. Pass those down.

19 I think we're down to the nitty gritty on
20 this. I'm just checking to see where we stood with
21 our other action items.

22 LOWE: I brought an example of an interim ROD.
23 I'd rather pass these out instead of taking them
24 home with me. People could just bring them
25 tomorrow.

1 BURIL: Okay. Great.

2 ROBLES: It's to the point.

3 LOWE: So maybe I'll just, since everybody is
4 flipping through it, I'll just say a few words.

5 This is not the same situation we have
6 here. This is an interim ROD for groundwater, but I
7 thought there were a lot of relevant sections in
8 here where they talk about like the rationale for
9 implementation of an interim action. We could look
10 at the kind of language they use there and modify it
11 for this situation. I didn't spend a lot of time
12 looking for examples.

13 ROBLES: This is a good example. This is a very
14 good example.

15 LOWE: But I don't know that there are any
16 interim RODs for off-base groundwater actions. I
17 kind of flipped through. Stephen had found one for
18 Norton Air Force Base, but it was a final ROD.
19 Since you guys were really interested in the types
20 of language that you need to use in order to make an
21 interim ROD, that's why I brought this one instead.

22 BURIL: That's fine.

23 LOWE: It's only selected pages because I had to
24 stand there at the machine and do it myself and it
25 was late yesterday.

1 ROBLES: So there's more to this than just this.

2 LOWE: Oh, yes.

3 BURIL: Is this what we could term an executive
4 summary of it?

5 LOWE: No, no. I flipped through and pulled up
6 the different sections that seemed relevant.

7 BURIL: I see. That's why we go from page 5 to
8 page 20 to page 40-something.

9 LOWE: Right.

10 ROBLES: How big is the whole interim ROD
11 itself?

12 BURIL: 80, 90 pages, something like that.

13 ROBLES: I understand why it's that big because
14 they attach off site as well as on site. The fact
15 is this is a good example, because the impact was
16 off site so much, that's why it had to be that big.
17 They were providing water to people off site, to the
18 community, to the local homeowners. Basically, I
19 don't know how they did it. The Air Force just
20 built a pipeline to the houses and started
21 distributing water.

22 BURIL: Let me suggest that rather than try and
23 review it now, since you folks haven't had a chance
24 to really look at it, that you take it with you.
25 Maybe this should be a topic of our next conference

1 call and finalize what you think about it. Does
2 that sound good?

3 I was just looking at our last RPM meeting
4 minutes to see if we had any actions.

5 Judy, do you have anything in your notes
6 regarding action items from the last meeting?

7 NOVELLY: Normally, anything I call out would be
8 the only time I speak.

9 BURIL: I didn't see anything.

10 Believe me, folks, that is a rarity.

11 I don't see anything. That's why I was
12 wondering.

13 It doesn't look like we had any actions.

14 NOVELLY: You did them last time.

15 BURIL: We said that we would put the quarterly
16 reports on the agenda and discuss what we felt about
17 them, and also about what impact it may have on the
18 project as a whole, including interim ROD. It
19 sounds like that's really a tomorrow topic as
20 opposed to today.

21 We went to the February 12th meeting at
22 the Raymond Basin Management Board.

23 Something here about a distribution of
24 guidance regarding presumptive response.

25 CUTLER: Which Debbie did hand out.

1 BURIL: Do you remember that one?

2 ROBLES: Debbie handed that out right now,
3 didn't she?

4 BURIL: Actually, she handed it out last time.

5 LOWE: I thought Kathy called me and said that
6 she was going to make copies and send them out to
7 everybody and she only had two. I thought I had
8 handed out three. So there was a thought that maybe
9 we're missing one of the ones I handed out.

10 BURIL: Who does not have a copy of the guidance
11 regarding presumptive remedy or presumptive
12 response? Does anyone not have that that needs it?

13 LOWE: I believe I handed out a presumptive
14 remedy guidance on soil vapor extraction, one on
15 groundwater, and then one generally how to implement
16 presumptive remedies. So those were the three that
17 I handed out.

18 BURIL: Judy, would you make a note for us to --

19 NOVELLY: I'll make it an action item.

20 BURIL: -- see if we have it buried in our stuff
21 somewhere. It might have gotten lost.

22 LOWE: If you check your files and see which
23 ones you don't have and maybe you can just make
24 copies for anyone who doesn't have them.

25 BURIL: Sure. That's fine. That's what we

1 agreed to do.

2 NOVELLY: I'm sorry. Make copies for Peter, or
3 give them out to everybody? What were we looking
4 for?

5 LOWE: I think Peter was the only one who said
6 he didn't have copies.

7 ROBLES: Right.

8 BURIL: Let's get one for Pete, then.

9 Then we also talked about PE samples,
10 which you have the proposal in your hand. So we've
11 got that one taken care of.

12 We're going to be talking about
13 conjunctive use and all those fun things tomorrow.

14 So it looks like we've tackled all of our
15 action items.

16 NOVELLY: So today's action items were that the
17 agencies have decided that we don't need to have a
18 holding time before we do the soil vapor sampling,
19 so we will proceed to set that up and we will give
20 you five days' notice so that Richard and Jon can
21 oversee the soil vapor sampling.

22 We are going to reissue the schedule, with
23 primary documents called out.

24 Everybody is going to get together for a
25 planning meeting to agree on how we're going to

1 divide the groundwater into layers to track
2 three-dimensional sort of concentrations.

3 We're going to add TBT samples at the top
4 two screens of MW-4 and at MW-8 for the next
5 quarterly sampling round, which will be in
6 approximately mid May.

7 Mark is going to check on calibration
8 range for MTBE to determine if 4 micrograms per
9 liter is a mid range spike level.

10 We will be discussing items 2 and 10 from
11 the agency recommendations on the groundwater
12 reports at our next conference call.

13 Also, we will attempt again to get a copy
14 of the presumptive response guidance documents to
15 Peter.

16 BURIL: There is one other one here that I
17 thought we had agreed to, and that was that we would
18 look at the modification of the schedule to account
19 for the Operable Unit 2 time savings that we've
20 encountered thus far.

21 LOWE: I had one other action item, to write a
22 letter to Peter regarding contracting issues.

23 ROBLES: We also discussed there one of the
24 items that we wanted to talk about.

25 BURIL: Contour maps in Appendix D. We had both

1 of those.

2 Anything else?

3 LOWE: Set up a conference call, and the next
4 RPM meeting.

5 BURIL: The first Thursday in the month is our
6 standing conference call. Is there any concern with
7 that?

8 LOWE: May 1st.

9 BURIL: I will tell you I won't be here.

10 BISHOP: I won't be here.

11 BURIL: Neither will I. Judy can fill in for
12 me, though.

13 LOWE: May 8th?

14 BISHOP: I will be back then.

15 GEBERT: May 8th. No. I'm going to a training
16 that day.

17 LOWE: May 9th?

18 BURIL: Debbie, may I suggest that unless
19 there's someone else, I didn't hear anybody else
20 that will miss the 1st, but if you're holding it for
21 me, don't. Judy can fill in for me, unless there's
22 someone else that can't make it that day.

23 BISHOP: I can't make it.

24 LOWE: May 8th?

25 BISHOP: I can make May 8th.

1 NOVELLY: But Richard can't.

2 GEBERT: In the afternoon? Is that possible?
3 It's a half a day training that I have to go to. I
4 think it's in the morning, so the afternoon would be
5 fine.

6 BURIL: May 8th, Peter, for our next conference
7 call, in the afternoon?

8 ROBLES: Yes.

9 BURIL: 1:30?

10 LOWE: Do you want to write that in pen in your
11 calendar?

12 BURIL: Red pen.

13 NOVELLY: Did we stipulate penalties for missing
14 a conference call?

15 ROBLES: When is our next RPM?

16 BURIL: We are in the middle of April. The
17 middle of July would be the next regular meeting.

18 LOWE: We're doing this quarterly?

19 BURIL: That is the required time frame. If we
20 have need or agreement to do it more or less
21 frequently, we can.

22 GEBERT: How is it required? Is that the
23 understanding?

24 NOVELLY: That's a minimal number in the FFA.

25 BURIL: It's in the FFA that we meet no less

1 than quarterly. But we could do it differently by
2 mutual agreement, it says. If we need to do it more
3 or less frequently, it's perfectly okay.

4 July is the, quote, next scheduled one.

5 LOWE: That's pushing into Jon's rafting
6 schedule then.

7 BISHOP: July is a bad month. Could we do it in
8 June?

9 LOWE: I think it's better sooner to do this,
10 what we had talked about with the groundwater
11 monitoring reports. Maybe we can get together
12 before then, not call it an RPM meeting but make it
13 more of a working meeting and work on that type of
14 thing.

15 ROBLES: Sure.

16 BURIL: That's fine.

17 LOWE: How about like the first week in June or
18 the second week in June?

19 GEBERT: That's fine with me.

20 BURIL: Can I ask that we have Kathy call around
21 and finalize the date? Because I don't have my
22 calendar with me for that time frame.

23 LOWE: Why didn't you bring your calendar?

24 BURIL: Because I was not expecting to move it
25 up. I was ready for July, but not June.

1 LOWE: But still --

2 NOVELLY: I won't be here the first week of
3 June.

4 ROBLES: Why don't we just tentatively say the
5 second week in June and let Kathy figure out which
6 one. Is that okay with everybody?

7 BISHOP: Yes.

8 NOVELLY: Now, if you call this a working
9 meeting and then you don't have one in July called
10 an RPM meeting, aren't we in violation of the FFA?

11 BISHOP: Right. And then we'll fine you, so
12 it's okay.

13 NOVELLY: Do you want to call this an RPM
14 meeting? Is there a problem with what it's called?

15 ROBLES: No. It doesn't matter.

16 BURIL: If we want to meet more frequently, we
17 can.

18 NOVELLY: There's no problem with meeting more
19 frequently, but there is apparently a problem with
20 meeting less frequently.

21 GEBERT: Maybe we can just move the RPM meeting
22 to the first week of June.

23 ROBLES: Or second week of June.

24 NOVELLY: Then we've at least met the
25 obligation.

1 GEBERT: Right.

2 NOVELLY: If we want to put another one in July,
3 great, no problem.

4 GEBERT: As soon as we get into June, July and
5 August we've got vacations and all that.

6 ROBLES: Second week in June is what we're
7 talking about for the next RPM meeting which we'll
8 focus on.

9 BURIL: Anything else that we want to talk about
10 in this forum?

11 All right. Sounds great. Look forward to
12 seeing you all tomorrow morning.

13 Thank you.

14 (The proceedings adjourned at 3:10 P.M.)

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