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REMEDIAL PROJECT MANAGERS' MEETING

5

NASA/JET PROPULSION LABORATORY

6

29 June 2000

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8 ATTENDEES:

9 Charles L. Buriel, JPL

10 Alex Carlos, RWQCB-LA

11 Mark Cutler, Foster Wheeler

12 Richard Gebert, DTSC

13 Mark Good, Navy (via telephone)

14 Vittal Hosangadi, Foster Wheeler

15 Mark Losi, Foster Wheeler

16 Judith A. Novelly, JPL

17 B. G. Randolph, Foster Wheeler

18 Mark Ripperda, USA EPA

19 Peter Robles, Jr., NASA

20 Richard J. Zuromski, Jr., Navy/NASA

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25 Reported by: Lester R. Linn, Jr., CSR 1054

1 Pasadena, California

2 June 29, 2000

3 9:40 A.M.

4
5 ROBLES: Why don't we go around the room and
6 introduce ourselves for our folks.

7 ZUROMSKI: I'm Richard Zuromski with the Naval
8 facilities Engineering Service Center.

9 RIPPERDA: And I'm Mark Ripperda from U.S. EPA.

10 GEBERT: Richard Gebert, from DTSC.

11 NOVELLY: Judy Novelly, JPL.

12 BURIL: Chuck Bupil, JPL.

13 CARLOS: Alex Carlos, Regional Board.

14 CUTLER: Mark Cutler with Foster Wheeler.

15 ROBLES: Peter Robles with NASA.

16 LOSI: Mark Losi, Foster Wheeler.

17 HOSANGADI: And Vittal Hosangadi, Foster Wheeler.

18 ROBLES: Who do we have on the phone?

19 GOOD: I'm Mark Good. I'm with Southwest
20 Division, Naval Security Engineering Command, and we
21 are here supporting Peter Robles for project
22 management acquisition and support services.

23 ROBLES: Okay.

24 ZUROMSKI: Great.

25 ROBLES: First of all, we have on our agenda list

1 is the OU-2 Draft-Final FS submittal schedule. I know
2 that we finally got the money issue resolved, so thank
3 you, Lord.

4 So what we want to do is now just go over,
5 and, Chuck, do you want to talk about when we can get
6 that?

7 BURIL: We're currently set for the date of July
8 28th. And that, I think, was what was conveyed via
9 phone. The principal delay, of course, was the
10 funding issue, and in the changeover things got mixed
11 up. But we are on track now and should be able to
12 supply document to you.

13 ZUROMSKI: 28th of July?

14 BURIL: July. That's correct.

15 CARLOS: That's the submittal date.

16 ROBLES: We need to have a letter that I need to
17 sign to give to the RPMs.

18 BURIL: Oh. Okay. Sure.

19 ZUROMSKI: Now, Chuck, that's a draft-final?

20 BURIL: Draft-final. That's correct.

21 ZUROMSKI: Are we going to go final with that
22 document, or how is that --

23 BURIL: Well, it depends. These gentlemen here
24 have got to decide whether it meets the thoughts that
25 they gave us on the draft or not.

1 RIPPERDA: Do you know how the whole CERCLA
2 process works?

3 ZUROMSKI: Generally, but I'm not sure what the
4 method of final draft-final is.

5 RIPPERDA: So draft comes to us. We comment on
6 it. We send our comments to NASA, and then they
7 respond to the comments, incorporate whatever they
8 want, issue the draft-final, and then that just
9 automatically goes final unless we invoke dispute
10 resolution.

11 ZUROMSKI: And that's within a certain time --
12 30-day time period?

13 BURIL: That's correct. 30 days.

14 RIPPERDA: So if we have comments on it, you know,
15 we can't comment on it except by going dispute
16 resolution, although some sites will --

17 BURIL: Although unofficially --

18 RIPPERDA: Unofficially --

19 BURIL: -- we have taken under consideration
20 comments that they've made when they've had minor
21 textual changes, things like that we have implemented.
22 If there is consternation regarding conceptual
23 approach, things like that, then those are a little
24 more substantive but we have not had that problem
25 much, no.

1 ZUROMSKI: So that unofficially, then, the --

2 BURIL: Unofficially, we can do what we want.

3 ZUROMSKI: We should have a final --

4 BURIL: Officially, they've got 30 days to make it
5 final.

6 ZUROMSKI: So theoretically the final should be
7 the end of August time frame for our --

8 BURIL: That is, for the scheduling purposes, for
9 the final, August 28th.

10 RIPPERDA: (UNINTELLIGIBLE) 30 days?

11 BURIL: Yes.

12 ROBLES: And just like we can ask for an
13 extension, they can ask for an extension to make
14 comments if it's a real issue.

15 BURIL: Not on the draft-final.

16 ROBLES: Not on the draft-final, but on the draft.

17 BURIL: The draft is very open, but the
18 draft-final is tight.

19 RIPPERDA: We could go to dispute resolution.

20 BURIL: Yeah. Hopefully we never come to that
21 point.

22 ROBLES: We try to avoid that because it's a
23 no-win situation for everybody.

24 GEBERT: The dates here on the new schedule are
25 not correct dates, or do these refer to another --

1 ZUROMSKI: Well, when we get to the schedule I'll
2 basically -- we had incorporated, especially for OU-2,
3 we had incorporated the draft-final. And Final FS
4 isn't here, not knowing whether Cal Tech was going to
5 finish them up or we were going to finish them. So
6 the schedule is going to change accordingly.

7 GEBERT: Oh. Okay.

8 ZUROMSKI: I think when we get -- talk about the
9 schedule, some of those things will be incorporated
10 into the --

11 RIPPERDA: That's good because I'm sure like
12 Richard and I --

13 ZUROMSKI: Right.

14 GEBERT: When I first saw this --

15 ZUROMSKI: Right. Now that we know that this is
16 going to be completed, I'm sure the schedule is going
17 to back up significantly from what we have on here.

18 GEBERT: Okay. So what was in the phone message
19 is still true, that it's going to be --

20 ROBLES: Right.

21 GEBERT: -- July 28th.

22 ZUROMSKI: Great.

23 ROBLES: Is there anything that we need to maybe
24 discuss conceptually about the OU-2 FS? There
25 shouldn't be any major issues.

1 (Randolph entered the meeting room.)

2 BURIL: For those listening on tape, B.G. Randolph
3 just arrived.

4 ROBLES: We thought you quit a day early.

5 Anything in the OU-2 FS that is a concern to
6 any of the RPMs? You know, we didn't have much of an
7 issue with that, but if there are any things that
8 anybody has? I believe when we get the document then
9 we can get the comments turned around right away. Is
10 there any --

11 CARLOS: Once it becomes final, how long before
12 you can begin preparing the proposal?

13 ZUROMSKI: I think that -- let's see. We have
14 here basically as soon as it becomes final. If we
15 were doing the contract, we would just give it -- just
16 plan doing it with the same contractor.

17 So right now, and I think we'll discuss this
18 also in a while, we're going to -- we're actually
19 right now requesting end-of-year funding from NASA
20 headquarters for the Navy to complete some of these
21 actions, and this will be included in those actions,
22 starting the proposed plan, beginning whatever other
23 documents that we need to do to get -- basically catch
24 up to this 2/13/01 date to push it back to wherever
25 we need to push it back to.

1 ROBLES: See, one of our biggest things is that we
2 were waiting for this week to get the word from NASA
3 headquarters. We had a major budget meeting. And we
4 were given the go-ahead to go and request the funds.
5 So we're hoping that we can get that so that we can
6 have the end-of-year funding and the beginning of
7 FY '01 funding.

8 RIPPERDA: Is this funding hang-up that you had
9 for several months a one-time thing, or is it --

10 ROBLES: Yes.

11 RIPPERDA: -- some procedural problem that NASA
12 has --

13 ROBLES: No.

14 RIPPERDA: -- that will occur again?

15 ROBLES: No, no. It was -- the procedure was
16 because of the changeover in the contractor that we
17 were using, from Cal Tech to the Navy. That was the
18 key.

19 As you see in the outline that there is a
20 descoping plan being submitted for certain of the
21 tasks that Cal Tech will be descoping and we'll be
22 transferring over those portions to the Navy. That is
23 the key. That was the biggest problem. There was
24 only a one-time hiccup in that. Normally there is a
25 funding procedure in processing. You know, we don't

1 go through this.

2 We'll let you know that we had approval for
3 FY '02. Fiscal year '02 on was approved by NASA
4 headquarters for our budget plan. So we have that in
5 good stead. So we don't see any major hiccups anymore
6 in funding. We should be able to get that. Now it's
7 on us to do the documentation to get them up to
8 headquarters so that we can get this money transferred
9 over to the Navy as soon as possible.

10 Any other questions on item 1? Okay.

11 Let's go to item 2, Status of the City of
12 Pasadena discussion. We've had two discussions with
13 the City of Pasadena. Basically, as we stated last
14 time, in our opinion, we have been given direction by
15 NASA headquarters to go and look at the interim
16 removal within the OU-3 is a major priority. We have
17 had preliminary discussions with the City of Pasadena
18 looking at putting a new Arroyo well next to their old
19 one and using, as of now, the conceptual discussion
20 has been is to use the Bain site --

21 BURIL: Baynor.

22 ROBLES: Baynor?

23 BURIL: Yes.

24 ROBLES: Bainer site, up on the -- it's in the
25 Altadena area?

1 BURIL: It's immediately outside the eastern
2 perimeter of JPL up on the hill. In fact, if you look
3 out the window, you can see it from here.

4 ROBLES: To use that as the site for the actual
5 equipment for the cleanup, pump the water from the
6 Arroyo Well, the NASA-owned Arroyo Well site that we
7 will be putting in up there, treating it and then
8 looking at either injection, but more likely
9 spreading. We would like to spread it. And the City
10 of Pasadena and the Hahamongna group under them
11 suggested that maybe spreading basins to the west; to
12 our east, to their west.

13 And what we're looking at right now is we're
14 getting information on size and depth so that we can
15 do some soil borings in there to see if it's even
16 possible to put spreading basins there. That's where
17 we would have the three new spreading basins.

18 BURIL: Starting about here and going further
19 south. Unfortunately we don't have a map that goes
20 any further.

21 ROBLES: Right. It's in the Arroyo Seco in the
22 park area, but it's just outside our fence.

23 ZUROMSKI: It's actually part of the City of
24 Pasadena's Hahamongna Watershed Park plan. So we
25 would essentially be assisting them. And that's some

1 of the negotiations that we're talking about right now
2 is how could we assist them in their park plan and how
3 can we do the work that we need to do in the same
4 time, because we're going to be directly impacting
5 what they want to do on their park plan, so --

6 ROBLES: First of all, if we produce any water
7 from the extraction of our Arroyo Well, we couldn't
8 spread any existing eastern spreading basins because
9 they want the full allotment for recharge, because
10 they have been allocated a certain amount. As much
11 recharge as they can put in there, that's how much
12 more they can extract.

13 I also got a call from Ron Palmer from
14 Raymond Basin, who talked about this. And he wants
15 coordination. But he says "Could you talk to the City
16 of Pasadena? Just please make sure that they
17 coordinate with the Raymond Basin because we have to
18 give our blessing on that."

19 We feel that this is a good way of being able
20 to have a win-win situation and it's easier to get
21 approval from the City of Pasadena. And first of all,
22 if the soil in that area can hold proper spreading
23 basins, then we build them for our interim removal and
24 then turn them over to them when we're finished. It's
25 a win-win for everybody. And it allows -- easier for

1 us to deal with the Regional Board and everything else
2 and then we could use that there. So that's what
3 we're looking at.

4 Also, we were talking about we would do some
5 infrastructure upgrade to support the Baynor site to
6 handle our equipment. And that would be left there
7 for them as well. It's what they needed.

8 Now, the question was where would we bring
9 the piping from the Bainer site to the spreading
10 basins, whether it would be over the land bridge that
11 we have. What's that called?

12 BURIL: The Eastern Bridge.

13 ROBLES: The Eastern Bridge?

14 BURIL: Yeah.

15 ROBLES: Or either a utility corridor that we
16 could then -- that they would need. Some of it would
17 need to be rebuilt.

18 ZUROMSKI: And part of the utility corridor I
19 think that they're proposing is viewed as part of
20 their Hahamongna plan.

21 BURIL: I didn't see the other big map, Pete.

22 ROBLES: I'll get the other big map.

23 ZUROMSKI: There are two -- there are two choices
24 that we were looking at. One would be pumping at --
25 Chuck, do we end north of that number 285 on the top

1 of there?

2 BURIL: Actually, that is the bridge.

3 ZUROMSKI: That is the bridge. So that's where --
4 that would be one choice where -- the Baynor site I
5 guess is over here, even further up. And then pumping
6 across, or they're proposing, the City of Pasadena is
7 proposing to build a utility corridor here and pumping
8 and sending the water across the utility corridor that
9 they're going to build.

10 BURIL: Let's be sure we understand. The utility
11 corridor is actually in the form of another foot
12 bridge --

13 ZUROMSKI: Right.

14 BURIL: -- or actually a new bridge across the
15 Arroyo.

16 ROBLES: Chuck, the Bainer site is right about
17 here?

18 BURIL: Up. Right there.

19 ROBLES: Okay. Right about there. So we would
20 take -- we would put our Arroyo Well just north of
21 their existing one, pump up there and either go across
22 the land bridge or utility corridor to the spreading
23 basins, three new spreading basins that we would
24 construct here.

25 So the key question is how do we do that?

1 What are the coordination? What are the hoops that we
2 have to do to do that? Right now we've had two
3 meetings. We're going to try to meet next month with
4 them at the City of Pasadena and talk about it a
5 little more. We asked them what size are you going to
6 want these spreading basins? How deep are they going
7 to be? Is it going to be gravity fed from the Baynor
8 site down there, or do we have to use pumps? Can the
9 soil hold that?

10 So what we're going to do is, they're going
11 to give us the dimensions and we're going to go out
12 and do some soil borings out there to see if the soil
13 can handle those spreading basins. If not, the only
14 alternative we have is reinjection at our perimeter.
15 So that's the two areas.

16 GEBERT: How do you determine if the soil would be
17 amenable to spreading basins? I mean what are the
18 tests that you look for? What do you look for?

19 ROBLES: It's transmissivity, and also there are
20 clay lenses there. If it's -- you know.

21 BURIL: What we typically do, Rich, is that we
22 take either as relatively undisturbed soil samples as
23 we can get maybe right there in the field, place the
24 soil under a given head water and simply measure the
25 length of time it takes for the soil to allow the

1 water to permeate through it. On the basis of that
2 you can come up with a percolation rate, and that will
3 determine the size, if you will, of the spreading
4 basin. You'll have a certain rate per square foot,
5 and if you need 10 cubic feet per second, say, to deal
6 with it, then you would know that a square foot is X.
7 So X number of square feet, then you can calculate it
8 out from there.

9 GEBERT: Okay. So if the percolation rate isn't
10 high enough, then it would not --

11 BURIL: Well, yeah. It's a question of whether
12 the percolation rate is high enough principally,
13 because what we're concerned with is because we're
14 dealing with an alluvial area, there may be lenses of
15 significant clays or silts that may impede water flow.
16 We don't know that it will happen, but my guess is it
17 probably won't. But we want to be sure, particularly
18 when we're talking about something that's going to be
19 there for a very long time, we want to be sure that
20 the soil is capable of doing what it is we want it to
21 do.

22 RIPPERDA: Do you have core samples from when they
23 put in the spreading basins across the --

24 BURIL: No. Those were put in way back in the
25 early '50s.

1 ZUROMSKI: And they don't feel -- the City of
2 Pasadena doesn't feel comfortable that the percolation
3 rate that they have from those will be the same on the
4 other side of the Arroyo just because of the deposits.
5 And so --

6 RIPPERDA: That's what I was asking about, bore
7 holes.

8 ZUROMSKI: Uh-huh.

9 RIPPERDA: Just so when you do your bore holes,
10 you can compare, you know what their perc rate is and
11 you can compare.

12 BURIL: Actually, what we have available to us is
13 we have the well logs from MH-01 and MW-3, which are
14 literally right next to -- as a matter of fact,
15 they're on the levee of the spreading basins. So we
16 can compare the geology, lithology from those boring
17 logs to whatever we come up with in these wells, these
18 borings. You have a good idea.

19 RIPPERDA: When you discharge from your ion
20 exchange treatability study and the flow rates were
21 low, that went for a few months, right, and mostly
22 constant flow rate?

23 BURIL: Right. Nothing even got out to the
24 Arroyo. It got into the area right outside the
25 discharge area, maybe 100 yards, if that, and it was

1 gone. So the likelihood of it being a problem, I
2 think, is low. But given the length of time and the
3 flow rates we're talking about, we don't want to take
4 any chances.

5 ROBLES: What we were concerned about is the depth
6 of the spreading basin. We take a soil boring and the
7 first 30 feet is going to be dug out. That's not what
8 we're looking at. We want to look at where the actual
9 percolation will be and that's what we want to take.
10 So we are waiting for the City of Pasadena to give us
11 a design or a conceptual design of what they want to
12 do over there on that site so that at least gives us
13 an idea of where we can do the soil borings.

14 BURIL: One other aspect I'll mention, because it
15 has been a topic here, very briefly is that the water
16 that we're talking about after it's been treated and
17 then spread, they do have features that would feature
18 more or less permanent ponds or lakes and maybe
19 potential for fishing. This water has been recognized
20 as not being part of that. They would not have this
21 water in any of the permanent features at all. It
22 would be purely spreading.

23 ROBLES: We are aggressively seeking this because
24 -- and I will kind of jump one to go to item 4. The
25 reason is because there is this AB 2646 that is going

1 to have an impact, we believe, if it gets past
2 Sacramento. The magic date in that Assembly bill is
3 January '02.

4 BURIL: '02 or '01?

5 ZUROMSKI: '01.

6 ROBLES: '01? January '01.

7 BURIL: January 1st, '01.

8 ROBLES: That's right. I'm sorry. January '01.

9 Before that, any remedial action or technology or
10 equipment that is in operation is grandfathered.

11 After that, then, this Assembly bill kicks in.

12 What it basically says in principle is that
13 any water that comes out of any type of cleaning,
14 cleanup technology, first has to be given to the
15 municipality, with certain caveats, that basically if
16 you want a waiver you got to ask permission from the
17 watermaster and from the local municipality and all
18 concerned parties. It kind of caught us by surprise.
19 We're looking at this, who really is the initiator of
20 this Assembly bill. It appears to be from the San
21 Gabriel area with the AeroJet. When we tried to talk
22 with Mr. Bowcock, -- he said he had nothing to do with
23 this.

24 RIPPERDA: Calderone is from that area, Baldwin
25 Park. He's involved with -- at least he sends letters

1 to my administrator concerning Baldwin Park
2 perchlorate cleanup and (UNINTELLIGIBLE) alternative
3 water supplies for his constituents.

4 ROBLES: Okay.

5 RIPPERDA: So he's active in the Superfund area.
6 On several sites he's concerned.

7 ROBLES: Because you see what our concern is that
8 we have talked with the Navy, our attorneys have
9 talked with the Navy attorneys and made a presentation
10 to the Assembly, particularly the committee that was
11 dealing with this, and the staffers. This has a
12 tremendous impact.

13 What it basically says is any water that's
14 cleaned up from anywhere has to be first distributed
15 to the municipalities. This flies in the face of some
16 of the policies that are within the federal
17 government, so therefore we're trying to see how this
18 is going to impact us, and that's why for us our
19 deadline to try to get something in the OU-3 is 1
20 January '01. We want to get that cracking. And so
21 that is our date. We don't know how this will work
22 out. We know that this Assembly bill won't get passed
23 this year. They're still in committee. But it might
24 get passed next year.

25 ZUROMSKI: You mean '02, then.

1 ROBLES: We don't know. They could still keep it
2 as '01.

3 BURIL: It could still be retroactive.

4 ROBLES: They will probably be retroactive. So we
5 got to shoot for January '01 to try to get something
6 in place in OU-3. We just want to make sure that at
7 least we can handle the ramp-up. So we have a fire
8 lit under us, so to speak. So that's why we're going
9 to be working very closely with the City of Pasadena,
10 Raymond Basin, working with you folks to try to get
11 this going.

12 One of the things that will be is that we
13 will be working very soon on a proposed plan. We're
14 trying to get our funding so that we can get this
15 going. And I believe at the next RPM meeting we can
16 give you a much more definitive idea of where we are
17 proceeding on this. We will have a couple of meetings
18 before our RPM meeting with the City of Pasadena and
19 Raymond Basin to try to see what we can come up with.

20 BURIL: Pete, are you talking about proposed plan
21 or time-critical removal action approach?

22 ZUROMSKI: We're talking about OU-3.

23 ROBLES: OU-3.

24 ZUROMSKI: Right. We're talking about interim
25 removal action. We're not talking about -- right.

1 We're not -- proposed plan is so far off I think --
2 you know, if we're ready to, we can get into the
3 schedule. I mean, if that's necessary, we can just go
4 into the scheduling discussions. Okay.

5 ROBLES: Any questions on anything to do with
6 that?

7 RIPPERDA: Whatever your motivation is, I'm sure
8 all of us are all for anything that gets you --

9 ROBLES: Faster.

10 RIPPERDA: -- moving faster.

11 ZUROMSKI: Right. Good.

12 ROBLES: But we may be calling you for help in the
13 sense of, you know, any coordination issue that we
14 need to do we want to make sure that we coordinate
15 with you. We want to make sure.

16 The City of Pasadena is very happy to see us.
17 They see this as a win-win for them. But I need to,
18 you know -- caveat is that they haven't made any
19 formal presentation to their board because they first
20 want to get everything together.

21 And I know how city councils work from
22 dealing with the (UNINTELLIGIBLE) data. You don't
23 bring something half-baked to the board. You make
24 sure that you have everything together so that they
25 only have to review it once. So that's what we're --

1 we're trying to support that, so we're working very
2 closely with them on that.

3 Why don't we get into the schedule, item 3,
4 and then see how that --

5 ZUROMSKI: I just want to say before we go into
6 schedule or while we get into the schedule, Mark Good,
7 who's on the line from San Diego, and myself developed
8 the schedule. It's basically a conceptual draft of
9 what we saw based on the continuing funding from NASA
10 and from what we feel are the matters of prime
11 importance for the site. So you can see that we have,
12 especially in OU-3, we've decided to go with interim
13 removal actions before we get to remedial actions.

14 I just want to see what you guys have to say
15 about this, and also if you have a lot -- any
16 questions, Mark's on the line, he can probably answer
17 some of them as well. Because as you can see, there's
18 a lot of things in there that have to do with our own
19 internal Navy contracting, so it might confuse you a
20 little bit. So if there's anything we can clear up,
21 we'll do that.

22 But I think what our intention is is to come
23 up with a schedule after we've looked at these dates
24 and looked at the draft with a schedule that will be
25 more amenable to the actual site issues, and we'll

1 have our own separate schedule for our internal issues
2 for ourself. So --

3 Mark, did you have anything you wanted to
4 start off with or add at this point?

5 GOOD: I think you covered it, Richard. Maybe you
6 want to go through the outline of the strategy for
7 that OU and --

8 ZUROMSKI: Okay.

9 GOOD: -- discuss relationship between the interim
10 action and the planned ROD and final remedy for the
11 site.

12 ZUROMSKI: Okay. So start with OU-3?

13 GOOD: Yes, I think so.

14 ZUROMSKI: Okay.

15 RIPPERDA: Before you get started --

16 ZUROMSKI: Sure.

17 RIPPERDA: -- a couple of questions.

18 ZUROMSKI: Uh-huh.

19 RIPPERDA: One is that it seems like over a year
20 ago we even stopped using OU-3. Everything was just
21 groundwater, it was OU-1/3, the RI.

22 So why now go back to completely separate OUs
23 for on site/off site? It seems like a totally
24 artificial designation.

25 ZUROMSKI: I think the strategy was because when

1 we did our Tiger Team review of the site, we looked at
2 the on-site hot spot of contamination as separate from
3 the plume that is extending off site. And I think
4 that from a strategy and budgeting standpoint is how
5 this was scheduled out, we thought that our first,
6 number one priority is to begin plume containment off
7 site, and off site we consider OU-3. And that's how I
8 personally have considered it.

9 If there's a way that you have done it in the
10 past and that you want to see it done, that's fine as
11 well. But we were considering -- you can kind of see
12 from what we've developed here our conceptual nature
13 of the site is to look at first priority getting into
14 OU-3, meaning plume containment, first priority.

15 Then while we're working on that, working on
16 OU-1 separately and doing our treatability studies or
17 possibly in situ treatment, which I have some results
18 on from our microcosm studies today, and work on those
19 kind of things as on-site treatments, so basically
20 separating them out for our own looking at the hot
21 spot and looking at the entire plume that goes -- that
22 extends off site, and also from the way we're
23 budgeting it as well. So that's just for our own ease
24 of use. That's how -- why we did that. But if
25 there's a way you'd like to see it, that's fine too.

1 ROBLES: Are you asking about it from the
2 standpoint of the documents produced?

3 RIPPERDA: Yeah. Just the overall -- you know,
4 this is a semantics question.

5 ZUROMSKI: Uh-huh.

6 RIPPERDA: This was originally designed as OUs 1,
7 2 and 3 and then at some point just as I was coming in
8 you guys dropped the 3 and just called it all OU-1.

9 ROBLES: Called it groundwater.

10 RIPPERDA: Groundwater, which I personally prefer.
11 It's like for semantics, you can do what you want to
12 do, but conceptually I prefer to think of it as
13 groundwater. And then you can do --

14 ZUROMSKI: On-site action source.

15 ROBLES: Source reduction and plume containment on
16 the groundwater, period.

17 RIPPERDA: But ultimately it's all integrated.
18 Anything that takes groundwater and piecemeals it out
19 seems to get away from looking at it as one
20 interactive problem.

21 ZUROMSKI: Okay. That's fine.

22 RIPPERDA: An interim removal action out there in
23 the Arroyo can happen no matter what you call your
24 OUs. So like if you really have to have OUs-1, 2 and
25 3 for contractual labeling --

1 ZUROMSKI: Uh-huh.

2 RIPPERDA: -- that's fine. But I just hate it
3 when we start to talk about one type of groundwater,
4 versus another --

5 ZUROMSKI: Sure.

6 RIPPERDA: I really don't like on site versus
7 on -- on site versus off site because it is --

8 ZUROMSKI: One site.

9 RIPPERDA: Right. It's like I hate to use a
10 property line --

11 ZUROMSKI: Right.

12 RIPPERDA: -- as any kind of definition.

13 ZUROMSKI: Well, in CERCLA it says that the whole
14 site is the whole site, anyway. But I guess we were
15 looking more for -- than semantical. It would be hot
16 spot treatment versus plume containment would be --

17 RIPPERDA: Yes. Source --

18 ZUROMSKI: Source reduction.

19 BURIL: Call it source reduction.

20 ZUROMSKI: Source reduction. Okay. That's fine.
21 We can do that.

22 ROBLES: Why don't we do that so we can not blur
23 those, you know.

24 CUTLER: Then you get back to say two RODs, or are
25 we back to just one?

1 ZUROMSKI: Well, we actually -- even though I had
2 it separated out to two OUs, I think our intent was
3 having the feasibility studies still completed as one,
4 the ROD still completed as one, the proposed plan all
5 still completed as one document. But, again, this was
6 for us to start our own kind of internal stuff. But
7 that's fine to do it. We could call it one thing and
8 -- that's fine.

9 RIPPERDA: When you start to deal with the public,
10 I just so much prefer English to --

11 ZUROMSKI: Sure.

12 RIPPERDA: -- OU-1 and OU-3. It's like it's the
13 groundwater operable unit, OU-1, and then in that
14 you've got subheadings of source control --

15 ZUROMSKI: Sure.

16 RIPPERDA: -- and plume control.

17 ZUROMSKI: Plume control. Okay.

18 ROBLES: Sure. That's a good point.

19 ZUROMSKI: Well, then, if we go over -- we can
20 move down to OU-3 because that seems to be our number
21 one priority at this time, along with -- and we can go
22 back to OU-2, which is going to shift as well for --
23 what we heard today.

24 You can see that our main priority right now
25 is -- as we're requesting the funding, it looks like

1 we're going to begin this process in the next few
2 weeks, begin our contracting process for our interim
3 removal action. And you can see that's going to take
4 us -- the contracting process. Again, we're going to
5 -- I'm going to try to summarize this into an easier
6 -- kind of a summarized schedule for you guys so our
7 contracting time lines and time frames are included
8 within the entire schedule rather than broken out. So
9 -- and I don't know. Maybe it didn't confuse you, but
10 I just wanted to kind of show you that.

11 The first ones are for the contracting,
12 developing the workplan and then actually getting out
13 into the field, starting field work in the interim
14 removal action in January of '01 and then hopefully
15 completing that by the end of the year. And
16 basically, from a contracting standpoint, the contract
17 would extend to July, but then it would basically
18 continue on.

19 If you look down several -- I think on 412 on
20 our sheet here is the Southwest contract interim
21 removal action. That's basically to continue those
22 operations for the interim removal. So that would be
23 our first priority, would be working on that. Then
24 you can see intertwined within there you also have the
25 action memos and the risk assessment feasibility

1 studies, et cetera, that are all -- that are included
2 in there as well.

3 But, again, our main focus is that interim
4 removal action right now, for OU-3 at least.

5 CARLOS: What's the difference between the interim
6 removal action --

7 ZUROMSKI: Uh-huh.

8 CARLOS: -- I think it's --

9 ZUROMSKI: 420 and 424?

10 CARLOS: Yeah. It was actually --

11 ZUROMSKI: Those are the -- those are basically
12 the continuation of the contract. Like I said, I
13 thought it might confuse you a little bit. So when we
14 finalize the schedule, we will look more at an
15 expanded schedule that makes it easier to see for you
16 guys. But, no, that basically -- the 383 is the
17 getting out in the field, starting the action, getting
18 it rolling.

19 And then I think in 412 through -- I think
20 all the way through 424, those are just -- they have
21 to update the contract every year. And so every time
22 that option is renewed that's why there's several
23 lines on that. We'll clear that up in the final, when
24 we get to a final schedule.

25 RIPPERDA: So unless you change the schedule, you

1 miss the whole January 1 Calderone bill thing anyway.

2 ZUROMSKI: Essentially it seems, from a design
3 standpoint, actually getting out to the field -- I
4 don't think there's a physical way to get into the
5 field, at least the entire process into the field
6 before the end of this year.

7 Now, according to what the bill says, and
8 we're going to have to have our attorneys look at it
9 to interpret what does a system -- what does the
10 system mean from this standpoint? Does it mean we
11 have to sink a well? Does it mean we have to start
12 pumping for some reason? I mean, we don't know what
13 that means yet. So if we do have to do something in
14 order to make that happen, we'll try to do it.

15 But as far as physically getting this system
16 into the field, no, there's not a physical way that we
17 can get into the field before January 1st of this
18 year. Just from the construction standpoint and the
19 design standpoint, from dealing with the City of
20 Pasadena folks, it's probably not feasible for the
21 entire system.

22 Of course, if we needed to, like I said, if
23 we needed to sink a well, if we need to do something
24 to make it so it gets grandfathered in, we could try
25 to do that. But we don't know what that is yet.

1 So --

2 ROBLES: We're watching that AB --

3 ZUROMSKI: Yeah. We're watching that.

4 ROBLES: -- 2646 and having discussions --

5 ZUROMSKI: Right.

6 ROBLES: -- with the folks in Sacramento to find
7 out how this is going to be played out.

8 ZUROMSKI: Both the Navy and NASA are tracking it.

9 ROBLES: What surprised us about this, the fact is
10 that not a lot of people have heard about this and it
11 caught a lot of people off guard, particularly the
12 federal agencies.

13 They just didn't know about AB2646. And when
14 we told them about it, "What do you think about this?"
15 "What? What do you mean?" You know, we faxed them
16 this bill and they said "Oh, my God."

17 So after reading it and looking at the
18 changes and calling up their local representative,
19 they found out it's still being developed and it's
20 still in committee and we don't know how the final
21 version will be out. It hasn't gone out for comment
22 as yet, so there's still a lot of work to be done on
23 it.

24 BURIL: Do you want to comment on the likelihood
25 of ultimate passage of this particular bill?

1 ROBLES: I don't know, honestly. I thought that
2 it would be a shoo-in to get this through. But I
3 think what's going to happen is, I believe that
4 there's a good chance it will get passed, but not in
5 its present form -- I think there'll be some major
6 modifications on it. Because there are a lot of
7 people, particularly the MWD has a real concern with
8 this, from our discussions with these folks and with
9 the federal facilities. They have gone up there and
10 said if you pass this, this is going to have a
11 tremendous impact on the present cleanup.

12 ZUROMSKI: And also water supply.

13 ROBLES: Do you have a copy of it in front of you?

14 RIPPERDA: Yeah. It doesn't seem that bad. You
15 know, it doesn't make you stop anything. It just
16 makes you offer your treatment water to the City of
17 Pasadena. Then they can choose to take it or not. If
18 you have a good working arrangement with them,
19 building your spreading basins, I'm sure you could
20 even, if you need it for your own contractual
21 purposes, sign an MOU with them by the end of December
22 of this year saying that you're agreeing to do a
23 spreading basin.

24 ROBLES: That's a good idea.

25 RIPPERDA: And having to get approval from DHS for

1 any reinjection. Who knows how DHS implements.

2 BURIL: That was very interesting, because that
3 appeared to take the realm of reinjection of water out
4 of the purview of Regional Board and place it in DHS,
5 which I would imagine State Water would have a little
6 concern with. So there's still some question mark as
7 to exactly how that thing would be implemented and its
8 tie-in with 97-005.

9 ROBLES: There's still going to be a lot of
10 infighting in the State level, and a lot of infighting
11 within, you know, the local purveyors on how this is
12 going to play out. So I believe that the chances of
13 it being passed, yes. Because Representative
14 Calderone is a very strong individual up there. The
15 question is in what form is it going to be and what
16 caveats are going to be in it. That's the thing that
17 we're watching very closely.

18 BURIL: Remember, this is an election year.
19 Anything can happen.

20 RIPPERDA: I would think that DHS approval would
21 only be are you meeting drinking water quality
22 standards at the point of injection. And certainly if
23 you're doing it, doing your injection on site, which
24 is defined in CERCLA as within the plume boundaries,
25 you wouldn't need -- no matter what this bill says,

1 you wouldn't need any permit. So if DHS decides to
2 implement this, a permit, public review process, you
3 would not have to do that. You would only have to
4 meet the substantive requirements.

5 ROBLES: Right.

6 RIPPERDA: And at most, the substantive
7 requirements would be drinking water quality. So even
8 if this gets passed in its present form, I don't see
9 it being --

10 ROBLES: That bad.

11 RIPPERDA: -- that bad.

12 ROBLES: We're watching it, and we'll keep you
13 apprised of that. We're looking at it every which way
14 to minimize the impact that it has on the removal
15 action and any other actions in the future.

16 We're watching it very closely. We have --
17 the Navy has a liaison person doing a regulatory
18 review in Sacramento. That's our point of contact.
19 And our attorney has been talking with them, giving
20 input on NASA's position and they're trying to gather
21 together all the federal agencies' position on this.
22 We're trying to see. Okay.

23 Anything else on the schedule?

24 ZUROMSKI: Well, that's -- that's what -- at least
25 for -- conceptually that's what we're looking at from

1 OU-3 right now.

2 We can back up to OU-2 and basically we can
3 -- your schedule will back up accordingly by moving
4 the proposed plan date probably to September rather
5 than -- I guess we have it in February right now. So
6 basically when I resub -- when we redo the numbers
7 everything will back up. I guess that's actually
8 about six months from -- because we had started in
9 February, we start in -- or five months if we started
10 in September. So your whole schedule is going to back
11 up accordingly.

12 RIPPERDA: So you're ready to have contractually
13 -- staffingwise, you're ready to have a proposed plan
14 just as soon as the feasibility goes final.

15 ZUROMSKI: And we'll be ready to -- to contract
16 for it and -- right. And move forward with it.
17 Right.

18 RIPPERDA: I never really understand the Navy or
19 DoD contracting. When you say you'll be ready to
20 contract for it --

21 ZUROMSKI: Uh-huh.

22 RIPPERDA: -- when the feasibility study goes
23 final, does that mean that you submit a proposal for
24 funding, or does that mean that you actually start
25 writing it the day it goes final, or that you're going

1 to be ready to contract for it when the feasibility
2 study goes final?

3 ZUROMSKI: And, Mark, you can probably answer.
4 Correct me if I'm wrong. Basically, we're going to
5 try to get our contractor in place that we're going to
6 have do this work before this feasibility -- it's
7 basically in the interim while we're doing this,
8 basically.

9 GOOD: That's correct. In other words, we need
10 about three weeks or so in order to have the
11 contractor on board with the preparation of the plan.
12 And in the detailed schedule which you don't see in
13 front of you we have other subpaths which portray the
14 precursor events or work effort necessary to start the
15 plan as soon as the feasibility study is complete.

16 ZUROMSKI: So there will be -- we'll be doing our
17 contractual wheels before the feasibility study is
18 final at the end of August. So I'm thinking that we'd
19 actually -- the contractor would probably be receiving
20 the task in September to actually begin the work on
21 the feasibility -- on the proposed plan.

22 RIPPERDA: That's what I really care about, since
23 the feasibility study has now been pushed out already.

24 ZUROMSKI: Right.

25 RIPPERDA: Anything that you can be starting

1 early --

2 ZUROMSKI: Right.

3 RIPPERDA: -- like the whole mechanism, get the
4 proposed plan and process --

5 ZUROMSKI: Uh-huh.

6 RIPPERDA: -- you might as well start now or as
7 soon as possible and not wait for the feasibility
8 study. You know you're going to write a proposed
9 plan, so just start the process sooner --

10 ZUROMSKI: Right.

11 RIPPERDA: -- rather than waiting for some
12 milestone.

13 ZUROMSKI: We're doing that right now. Actually,
14 I think over the next week we're going to be sending
15 our documents up to NASA headquarters requesting the
16 funding. And then in the interim Peter and Mark and I
17 are going to strategize on which contractors we're
18 going to use for which tasks, because we're going to
19 use -- we're anticipating using different mechanisms
20 to do different items here because some mechanisms
21 work better for others. So we're going to be
22 strategizing on that in the interim. So we'll have
23 our contract plan ready so we can go ahead as soon as
24 we get the funding from NASA, award contracts, which
25 should be before this September time frame, and then

1 it will already be in place when the work comes ready
2 to do.

3 ROBLES: We're trying to do everything we can so
4 that when the money comes down all we do is just hand
5 a task order --

6 ZUROMSKI: Right.

7 ROBLES: -- to the contractor that has been
8 selected and say "Go do it."

9 ZUROMSKI: And that's why, like I said, when we
10 redo the numbers I'll take out and just roll up the
11 contractual mechanisms into the entire task so you
12 won't have to figure out when we're actually going to
13 start the work and when it's actually going to really
14 start the work. So it will be easier to understand, I
15 think.

16 So that's for OU-2.

17 And then if you go back on the first page,
18 you can see there's some basic program management
19 issues in the top with the descoping, transition
20 plans. Administrative record is another one of those
21 things we're going to be looking at transitioning, at
22 least getting the contract in place.

23 And then you can see in OU-1, these are the
24 things that we were going to talk about. And I think
25 I brushed on these last time in the last meeting. On

1 the third page there's a pilot study that Chuck and I
2 are working on with U.S. Filter and we're going to --

3 I don't know, Chuck. Do we want to address
4 that now, or shall we -- let's finish the schedule
5 first and then we'll go through this. But we want to
6 talk to you briefly about our pilot study again.

7 But you can see OU-1. We're going to be
8 doing a couple of different pilot studies on site.
9 We're going to be doing this U.S. Filter pilot study,
10 and we also want to do a fixed-bed bioreactor pilot
11 study on site basically to support our feasibility
12 study document and also to support the design for
13 whatever type of remedial system we put out in OU-3.

14 You can see, also, we have in there doing
15 some soil geotechnical work. And that's in support of
16 working on in situ bioremediation. And I didn't print
17 it out, but I will hand you all a copy before you
18 leave today. We have our preliminary results from our
19 in situ microcosm studies that we had Envirogen do.
20 And they looked fairly promising. After 20 days of
21 microcosm study, they had pretty significant
22 reductions in perchlorate, actually below nondetect in
23 20 days using I think three different electron donors
24 and a couple of their own bacterial concoctions, but
25 we saw some pretty good success with that. So they're

1 right now still in the process of isolating the
2 bacteria, seeing what the actual mechanism is that's
3 destroying the perchlorate. And if that is
4 successful, we plan on going into the field, doing
5 some soil borings to see where we would do pilot study
6 in situ projects. And so, again, these are all in
7 support of that.

8 I think if you get down to getting into
9 remedial investigation addendum, risk assessment
10 feasibility study, those are basically in support of
11 the risk assessment addendum. And the feasibility
12 study and RI addendum are in support of these new
13 technologies that we're going to be considering. So
14 those are basically as necessary if we need to do
15 additional work in the field to further characterize
16 the site.

17 Then, move further down into 155. You can
18 see where we're actually starting to get into EPA
19 action memos for a proposed nontime critical removal.
20 That would be on site. But, again, those dates we
21 really don't know. Those are kind of dates based on
22 what our concept of the site is, but in reality we
23 don't -- we're not really sure of when any types of
24 nontime critical removals would happen. It's going to
25 depend on the success of our pilot studies if we do in

1 situ work. Those things could -- if the in situ work
2 is not successful, we would really look at moving
3 those up into looking at other types of on-site
4 treatment if necessary. So those are kind of in there
5 as what our concept of what the site is right now and
6 could change accordingly. So we're not sure.

7 But this is basically our best guess at
8 looking at Tiger Team data, looking at data that
9 exists on the site, looking at our budget and time
10 line and the time line that Chuck had already
11 developed and kind of throwing that all into the mix
12 and this is what we came out with.

13 So, again, this is a draft and we want your
14 comments and we will try to finalize something that's
15 easier for you to read and that we could agree with in
16 the future. So --

17 RIPPERDA: Why is the record of decision way out
18 in 2004 when your proposed plan is in 2002?

19 ZUROMSKI: I'm not sure. Mark, can you answer
20 that one? I'm looking at that right now. Proposed
21 plan is 2002.

22 GOOD: Based upon time required to implement both
23 a bench scale and/or nontime critical actions at OU-1,
24 we -- and budget guidance to date from NASA
25 headquarters, that we would not be in a position to

1 start the proposed plan until '03, FY '03, possibly
2 delaying the final record of decision into the early
3 FY '04 time frame.

4 ZUROMSKI: But I can see there was also -- you can
5 see we have some cushioning room between the public
6 involvement and the record of decision. We have about
7 a six-month cushion there, which again are basically
8 cushioning things that are depending on how things go
9 with our studies, how things go in coordinating the
10 groundwater versus the hot spot. And, again, those
11 are -- they're draft numbers.

12 If you have comments on them, please let us
13 know. We will work on those gaps like that. There
14 are those cushions. Those cushions do exist in the
15 schedule, so you should comment on them if necessary.

16 GOOD: It's fair to say if the success of the
17 bench scale or pilot treatability studies at OU-1
18 bring significant -- could bring significant
19 improvements to the schedule in advance of the record
20 of decision into the late '02-'03 time frame based
21 upon the outcome of the initial treatability study.

22 RIPPERDA: So both the U.S. Filter treatability
23 study and the fixed bed reactor, those are both bench
24 scale?

25 ZUROMSKI: Those are 10 gpm pilot scale.

1 RIPPERDA: So those are in the field.

2 ZUROMSKI: In the field.

3 RIPPERDA: The bench scale that he's talking about
4 is bio?

5 ZUROMSKI: Actually, I think the bench scale, most
6 of the bench scale work is already done, or the
7 preliminary stuff was done by Envirogen and we're
8 waiting to see, basically, the final results from them
9 right now. And I think actually what would happen,
10 the next step would be doing our soil and geotechnical
11 work and getting some actual soil samples to test it
12 in a further bench scale, and then going out and doing
13 a pilot scale treatability in the field. So there's
14 probably one or two steps in there.

15 RIPPERDA: So going back to the U.S. Filter and
16 the fixed bed, those are both going to happen out
17 here, same as you did before.

18 ZUROMSKI: Yes.

19 RIPPERDA: Discharge the Arroyo.

20 ZUROMSKI: Yes.

21 RIPPERDA: But those are basically to test methods
22 to treat for the new Arroyo Well --

23 ZUROMSKI: Yes.

24 RIPPERDA: -- which is all -- it's all one OU.
25 Because you've got it here in your OU-1.

1 ZUROMSKI: Right.

2 RIPPERDA: But otherwise, there should be actually
3 an OU-3.

4 ZUROMSKI: Right.

5 RIPPERDA: So those studies from September and
6 October, they're both going to go for two to --

7 ZUROMSKI: Two to three months.

8 RIPPERDA: -- three months.

9 ZUROMSKI: Uh-huh.

10 RIPPERDA: You know, you use those results to pick
11 a treatment method for your Arroyo Well and then this
12 nontime critical removal action that is down in late
13 '02 and early '03 --

14 ZUROMSKI: In situ.

15 RIPPERDA: -- that's an in situ --

16 ZUROMSKI: Yes.

17 RIPPERDA: -- source reduction.

18 ZUROMSKI: Yes.

19 RIPPERDA: I don't see a treatability study in
20 bench scale or field scale, so basically your removal
21 action is going to be your treatability study.

22 ZUROMSKI: Well, essentially when -- we would do
23 the -- we're already doing all the bench scale stuff
24 through the Navy research contract right now. But,
25 right, we would do probably -- you're probably

1 familiar with when you do some kind of electron donor
2 injection. You're probably going to want to try to do
3 one small injection, see where the radius of influence
4 goes, see what it does, how it impacts the groundwater
5 monitoring wells. And from there we need to do -- if
6 we see that it's effective, then we'll do more wells,
7 more injections. But we want to -- it's very
8 expensive to sink a well and do that. So it's better
9 to start off small, see if it works. And if it does
10 have some kind of impact on the hot spot and it does
11 do -- affect some source reduction, then we will
12 expand it. So --

13 RIPPERDA: I missed that at 105, which is in situ
14 pilot.

15 ZUROMSKI: Right.

16 RIPPERDA: And that's happening in seven months.
17 So that's going to be a small field scale.

18 ZUROMSKI: Yes. Right

19 RIPPERDA: And, then, based on that you may go
20 larger field scale.

21 ZUROMSKI: Right.

22 RIPPERDA: And your larger field scale is what
23 you're calling your --

24 ZUROMSKI: Nontime critical. Yes. That's
25 correct. So, again, those are dependent on the

1 success of the biological -- the bench scale studies
2 that are being conducted right now in the Navy
3 research contract. And then -- so basically it's just
4 showing the natural progression of that through --
5 doing the pilot and then doing the nontime critical
6 after that. So I think that pilot actually includes
7 like several six-month kind of small injections to
8 see, okay, let's inject, let's see what the effect is,
9 do -- get the results, then if it was effective, try
10 another one, see if it was effective, and then if it
11 was, then go and spend a bunch of money and sink a
12 bunch of wells in there and try to really effect some
13 large-scale source reduction.

14 RIPPERDA: Why not just move everything up after
15 you've done your half a dozen or so pilot studies --

16 ZUROMSKI: Uh-huh.

17 RIPPERDA: -- instead of going to a nontime
18 critical removal action? You've done all the
19 regulatory paperwork you got to do. Why not just go
20 right to the ROD at that point?

21 ZUROMSKI: Well, I think that if we're looking at
22 just ground water, then we might not necessarily be
23 ready for all the entire Arroyo at that time. So if
24 we want to combine it into one, I think that that's
25 maybe one of the reasons we were thinking of going

1 that way.

2 RIPPERDA: Okay.

3 ZUROMSKI: But we can take that into account as
4 well.

5 RIPPERDA: That's OU-2. This one -- see, yeah. I
6 don't think that's a problem because your -- under
7 what you have as OU-3 you've got a draft-final
8 feasibility study in September '01 and then basically
9 you've got three years of nothing happening with the
10 ROD in '04. So it looks like your '03 is actually
11 waiting on '01 stuff.

12 ZUROMSKI: '01 stuff, right.

13 RIPPERDA: And your '01 stuff through all that
14 time period is your nontime critical removal action.

15 ZUROMSKI: Okay.

16 RIPPERDA: So if your pilot studies all look
17 positive, it seems like you could just go right to a
18 ROD at that point.

19 ZUROMSKI: Okay. True. I mean, those are the
20 comments that we need to look into. So that's fine.
21 I think basically we're getting a better picture every
22 day of what Chuck and Foster Wheeler's end of this --
23 of what the work that they're doing and how we're
24 going to transition some of that work and how we're
25 going to incorporate them in this whole process and at

1 the same time looking at -- we're actually requesting
2 more funding than was requested in the past because we
3 want to do these OU-3 studies and all these other
4 extra studies. So basically we're learning every day
5 how the project's expanding and transitioning.

6 So that's one of the main reasons why we
7 would like your comments now, in the early stages of
8 this, so we can make sure we get a more -- you know, a
9 real realistic schedule for what we're going to do.

10 ROBLES: Do you want to go over the U.S. Filter
11 project?

12 ZUROMSKI: Sure, if you want.

13 And, Chuck, you have a copy of this. I just
14 kind of threw this together based on -- Chuck and U.S.
15 Filter and myself, we've been talking several times
16 since mid June about -- and they've received -- they
17 sent us a revised proposal, which, again, I'm going
18 to -- I'll give you a copy after this meeting to look
19 at.

20 And Chuck and I want to basically address
21 what do we need to get to you in order to move forward
22 with our pilot study. Because they're ready. They're
23 basically on a 30-day holding pattern right now. As
24 soon as we give them the word and we can coordinate
25 this with the on-site coordination we need to do, and

1 with your coordination, we can get them in the field
2 in 30 days.

3 And Chuck wasn't sure if were going to just
4 kind of ask you guys what we need to do in order to
5 move forward with the pilot study. Do we need to
6 submit a workplan to you or do we need to show you our
7 sampling schedule or a combination of the entire
8 thing?

9 RIPPERDA: Legally you have to do very little,
10 unfortunately. We don't have that much control over
11 treatability studies. You know, in the FFA there was
12 these secondary documents, I believe, which means
13 basically you can go out and do whatever you want with
14 or without our input. Of course, most sites, you
15 know, send things to us for technical review.

16 So as far as the documentation goes, yeah,
17 it's certainly good form. Give us your workplan, give
18 us anything else. But if you have a real time crunch,
19 you want to like get things moving, you can go ahead
20 and start moving. And if we don't like what you're
21 doing, our way of actually legally stopping you is
22 when we come to a primary document, like the
23 feasibility study or the ROD, we can at that point say
24 your feasibility study was so screwed up that we don't
25 believe anything you guys are telling us.

1 ZUROMSKI: Okay. I can give you a copy of what
2 we've come to kind of a consensus on so far. Probably
3 it's going to go through one more iteration. But I'll
4 give you a copy of that before you leave today.

5 CARLOS: So the work plan we don't need to
6 approve. It's a secondary document.

7 RIPPERDA: They don't need our approval. Most
8 sites just do it because it's good form.

9 BURIL: You don't want to get to the feasibility
10 study and then have you say exactly what you said.

11 RIPPERDA: Right.

12 ZUROMSKI: We want to make sure we get the data
13 that we need from this study that's going to be
14 reliable so that if we do decide to go with X
15 treatment train that you guys said that it was -- we
16 did the right thing in our treatability study.

17 RIPPERDA: Right. But realistically, you know,
18 these kind of chemical treatability studies, I don't
19 know any -- I don't know anything about ion exchange
20 or a packed bed, so I'd like say why don't you try a
21 higher flow rate or a lower flow rate. But even
22 before seeing it, no, I don't really have anything to
23 add to it. So you do what you need to do for your
24 ultimate design purposes.

25 The other point that Alex, I'm sure, really

1 cares about is your discharge.

2 ZUROMSKI: Right. And that's Chuck --

3 BURIL: Which is one of the things that I know,
4 Alex, you and I spoke earlier about. I was wondering
5 if you had made any progress on --

6 CARLOS: Actually, the discharge from the -- Mark,
7 when I talked to you about for the Calgon study,
8 whether the discharge was under (UNINTELLIGIBLE) which
9 is the case, the discharge would not apply to any
10 existing permit that JPL had.

11 BURIL: Oh, it was? Okay. I wasn't sure myself.

12 ZUROMSKI: But then I know that Mark said we don't
13 want to do that again, I think. So we were
14 hovering --

15 BURIL: There was a concern expressed at EPA that
16 you mentioned, but I guess it may have been resolved,
17 about not having gone through this whole permit
18 process.

19 RIPPERDA: No. I said that?

20 BURIL: That's what I remember.

21 RIPPERDA: No, I didn't say that.

22 BURIL: It surprised me too.

23 RIPPERDA: I want to see the minutes.

24 ZUROMSKI: We just -- I guess we just want to
25 clarify what do we need to do --

1 BURIL: Yeah. What do you need from us to be able
2 to --

3 ZUROMSKI: -- to do that.

4 BURIL: -- basically do the same kind of discharge
5 we did for Calgon.

6 ZUROMSKI: To start basically down the hill to the
7 storm drain.

8 RIPPERDA: The only thing I imagine saying is that
9 like keep the Regional Board happy in that legally
10 from, you know, the federal government viewpoint, our
11 interpretation of CERCLA is that you don't need a
12 permit, and that for Calgon, you know, just to close
13 all the circles, you know, I got a copy of their
14 permit. Basically, you know, he sent me that.

15 BURIL: Right. And there were some conditions
16 that were established on the basis of that permit.

17 RIPPERDA: And so I used that as the substantive
18 requirements --

19 BURIL: Okay.

20 RIPPERDA: -- and then sent that to you as a
21 letter saying that any discharge must meet with these.

22 BURIL: These criteria, here's your sampling plan
23 and so forth.

24 RIPPERDA: Which could just as easily come from
25 Alex as opposed to me.

1 ROBLES: Could we use those --

2 BURIL: That's basically what we need.

3 CARLOS: Maybe just follow what you guys used in
4 that Calgon study.

5 ROBLES: Could we use what we --

6 BURIL: If we get a letter that clarifies that we
7 can utilize those same criteria, that would be ideal.

8 RIPPERDA: Then I'll --

9 ZUROMSKI: Could we get that?

10 RIPPERDA: -- send the same letter.

11 ZUROMSKI: That would be great.

12 BURIL: You know, making note of the schedule
13 differences as far as length of time, discharge and
14 things like that.

15 ZUROMSKI: And just kind of incorporated into this
16 was that initial planning. But, theoretically, if we
17 get going and all we have to really do is comply with
18 the substantive requirements, we can move this up
19 accordingly.

20 BURIL: That was very --

21 ZUROMSKI: That was our biggest time waiter right
22 now was if we had to modify that -- the permit or not.

23 BURIL: I think we probably have more time in here
24 than is necessary to do that.

25 RIPPERDA: Yeah, I think so.

1 BURIL: Certainly you have a lot of other things
2 going along simultaneously. So I don't see that as
3 being a big problem.

4 RIPPERDA: The only concern that I might have
5 voiced, legal concern, would be if this stuff moves
6 off site. So once you discharge into the Arroyo, it
7 gets transported --

8 BURIL: Outside of the plume.

9 RIPPERDA: -- outside of your plume or to
10 someplace where it's a surface water body, where
11 somebody, even though it's been treated, where
12 somebody might be exposed to it.

13 But, you know, from what you said, it soaks
14 in so fast that I don't want to try to control. I'll
15 just accept that it soaks in so fast that it's not
16 moving off site.

17 ZUROMSKI: We're actually putting a lot of
18 safeties in our design to make sure that we're going
19 to easily meet the discharge requirements. We're
20 basically -- and I'll -- you'll see the copy in a
21 minute, but we're starting off -- they're doing a
22 pre-filter, and then they're going to go into carbon
23 to knock out the VOCs. Then they're going to go into
24 the fixed bed or, excuse me, the fluidized bed reactor
25 to -- and that's where we're going to be monitoring

1 the perchlorate reduction. And then from there we're
2 going to go into a basic packed bed ion exchange just
3 to make sure that if we have any bumps in our
4 biological system that the perchlorate's destroyed
5 before we get out of the system, and then a carbon
6 polishing at the end. So very little problem. We
7 should have very little problem meeting any of the
8 discharge requirements.

9 BURIL: Theoretically, you should be able to drink
10 this stuff by the time it comes out.

11 ZUROMSKI: Yeah. Right.

12 RIPPERDA: And what about the concentrated
13 effluent --

14 ZUROMSKI: Right.

15 RIPPERDA: -- the other side of the --

16 ZUROMSKI: Right. Actually, what they're going to
17 do is, not the brine, but the sludge from the packed
18 bed, or excuse me, the fluidized bed reactor is going
19 to be tested by the contractor to do TCLP testing to
20 see if it's hazardous or not. If it's not, they're
21 going to dispose of it as nonhazardous waste off site.

22 BURIL: So to answer your question, all of the
23 processed waste flows are collected --

24 ZUROMSKI: Right.

25 BURIL: -- and then tested to determine whether or

1 not they're hazardous. On the basis of the analysis
2 they're disposed of, recycled or whatever is
3 appropriate.

4 RIPPERDA: A couple things about that. In all our
5 previous talks about doing a large-scale treatment,
6 the huge concern has been what do you do with your
7 concentrated effluent.

8 ZUROMSKI: Uh-huh.

9 RIPPERDA: Do you pipe it somewhere? Do you treat
10 it biologically? Do you have some catalytic reaction?

11 ZUROMSKI: Uh-huh. Are you --

12 RIPPERDA: Is that still a concern, and are you
13 going to be trying to work with this?

14 BURIL: Absolutely.

15 ZUROMSKI: Yeah. Right.

16 ROBLES: Our main goal is to try to have a zero
17 discharge, in other words, zero hazardous discharge.
18 If it could meet the standard so that it can be, say,
19 "Hey, this is as good as drinking water," then we can,
20 you know, let it go down the sewer system. That's the
21 only thing that will work.

22 RIPPERDA: So what's the contractor saying about
23 the volume and concentrations of --

24 ZUROMSKI: Small. It's a small amount of -- and
25 probably Mark and Mark can say it. What do you have,

1 you know, from your fixed bed or your fluid bed
2 reactor? I mean, your volume is so low. And it's
3 mostly going to be nonhazardous.

4 BURIL: The flow rate that you're talking about is
5 very small concentrations. The ultimate total mass of
6 the material is very small. A good part of it is
7 going to be destroyed.

8 ZUROMSKI: Right.

9 RIPPERDA: I care more about scaling it up when
10 you go and put your Arroyo Well in and you're
11 pumping --

12 ZUROMSKI: Right.

13 RIPPERDA: -- a million gallons a day, how much
14 waste --

15 BURIL: How much material is generated?

16 RIPPERDA: -- and what are you going to do with
17 it?

18 BURIL: That's a good question. That would have
19 to be part of what we decide --

20 ZUROMSKI: Right.

21 BURIL: -- once we understand the process a
22 little better.

23 RIPPERDA: And then back to this treatability
24 study, no matter how small your effluent is, you know,
25 I'm very confident it will pass TCLP. But just be

1 careful. You still have to treat it as a CERCLA
2 waste. You're shipping it off site, so it has to go
3 to an approved off-site disposal facility.

4 BURIL: Right. There's a whole big thing about
5 CERCLA investigation derived wastes.

6 ROBLES: Yeah.

7 BURIL: That we've been following all along.

8 ROBLES: Our goal is to try to have zero
9 discharge. If not, at least get that to a point where
10 it's not hazardous and it doesn't fall into the CERCLA
11 waste category.

12 RIPPERDA: No, it's still important. It doesn't
13 have to be hazardous. Even if it's drinkable, it's
14 still CERCLA waste and it has to go to an approved
15 facility for CERCLA waste.

16 ROBLES: Boy, that sounds so familiar. It's like
17 dewatering our space shuttle up at Edwards. Even
18 though it was pure water, we had to pay to get it to a
19 facility because it was -- even though it was pure
20 drinking water with nothing in it.

21 BURIL: It's defined as a waste. It's in that
22 bailiwick.

23 ROBLES: Right. Okay. I see your point. I'm
24 familiar with those kind of problems. I really got
25 ticked off that I'm paying \$500 a drum for pure water

1 to dispose of it, but I had to do it because it came
2 off as hazardous waste.

3 (OVERTALK.)

4 ZUROMSKI: So that -- this is -- I'll give you a
5 copy of our general workplan and analytical plan at
6 this point, and I'll also give you a copy of our
7 microcosm study data.

8 I just have it on the computer. You'll see
9 on my e-mail, I was having problems printing on this
10 printer last night and so, say, 5:30 and I was trying
11 to get you the schedule and I said -- I gave up after
12 a while and I wrote you another e-mail that said
13 you're probably not there, so you can -- I'll give it
14 to you in the morning. So I'll give you the other
15 stuff right now, too, that I was going to e-mail.

16 CARLOS: The two pilot studies that you're
17 proposing here on C-2 --

18 ZUROMSKI: On -- on which one, Alex?

19 Oh. Okay. On OU-1. No, actually -- right.
20 The two on here, the --

21 CARLOS: The U.S. Filter and fixed bed.

22 ZUROMSKI: Right. Those are two different ones at
23 Monitoring Well 7 up here. Two separate studies.

24 CARLOS: So the purpose of those two studies is
25 to look at other treatment options?

1 ZUROMSKI: Two different technologies.

2 CARLOS: But also look at the -- how well they can
3 treat the waste?

4 ZUROMSKI: Right. Well, biological treatment
5 automatically destroys the perchlorate. And so
6 we're basically looking at it from a perchlorate
7 destruction standpoint in lieu of having to do Calgon
8 or any other ion exchanges. Basically, the concern is
9 right alongside the ion exchange.

10 BURIL: Rich, it might help them if you went
11 through the process a little bit just to give them
12 some familiarity with what you're talking about.

13 ZUROMSKI: For --

14 RIPPERDA: The U.S. Filter and the fixed bed.
15 Give us a quick overview of both.

16 ZUROMSKI: Okay. The U.S. Filter, basically what
17 we're going to do is we're going to get these guys out
18 in the field for two -- two -- a two-phase test.
19 They're going to pump directly from Monitoring Well 7
20 into their process, which goes through an initial
21 filtration to get out basically any solids. And then
22 it goes through carbon for taking out the VOCs, then
23 goes through the fluidized bed reactor, which takes
24 care of the perchlorate, then goes through ion
25 exchange, which is -- in the full-scale design if the

1 success of this technology is what we hope, you're not
2 going to have that on the full-scale design, but that
3 is just a failsafe, because we're going to be trying
4 to do a lot of adjusting of the system to see how it
5 can handle spikes, how it can handle low
6 concentrations of perchlorate coming through, because
7 basically the perchlorate feeds the biological -- the
8 bugs that are destroying it. And we don't know, if it
9 goes to a certain low, whether or not it would be able
10 to effectively treat the perchlorate. So we're going
11 to try to stress the system as much as we can in order
12 to get a full range of operating conditions for the
13 system.

14 And then once it goes through -- so basically
15 that's why we have ion exchange on there. And then
16 carbon polishing at the end. And that's our basic
17 setup and testing for the U.S. Filter study.

18 The fixed bed reactor study is another
19 biological reactor that was recommended to us by one
20 of our Tiger Team members, and it was also studied
21 to -- I guess on a bench scale by UC Riverside, which
22 is included in the FS in one of the appendices, B or G
23 or --

24 LOSI: E.

25 ZUROMSKI: E. Okay. And E. And so we've seen

1 that from the gentleman from Arcadis, which was Evan
2 Nyer, and also from the preliminary results of the
3 feasibility study that a fixed bed reactor may be more
4 economical and still be able to treat the low
5 concentrations of perchlorate that we're going to see
6 out in OU-3. So we wanted to test that one as well,
7 because it's -- that's probably the one that's been
8 the least tested out of all the different perchlorate
9 treatment technologies that are out there.

10 So we feel that if we could get some good
11 data off that, that would be another option for
12 treatment. And we'll probably go through the same
13 kind of process that we're going to go through with
14 U.S. Filter. Instead of having the fluidized bed
15 reactor, though, you're just going to have a fixed bed
16 reactor. And so just the reactor design is what's
17 going to change on those two different studies.

18 And that one we're basically right now -- the
19 U.S. Filter folks have told us they're basically going
20 to -- for free they're going to give us this U.S.
21 Filter pilot. It's not truly free because we have to
22 pay for some of the analytical costs and carbon costs.
23 But they're essentially providing the equipment, the
24 labor and all the -- their technical knowledge to do
25 this. So it's going to be pretty inexpensive for us

1 to do, so that's why we're moving on this one really
2 quickly.

3 The second one for the fixed bed reactor
4 we're going to have to pay for, and so we're basically
5 right now waiting for funding from NASA so we can go
6 ahead and contract for that and probably begin that
7 one. Right at the tail end of the system for the U.S.
8 Filter we'll probably get in with the fixed bed
9 reactor, or at the same time. We haven't really
10 decided what we're going to do yet, but we're
11 basically waiting on that one because of the --
12 because that one is going to cost us money, whereas
13 the other one is free. So anything free we decided,
14 said, well, that's a good thing to do. If we can get
15 some good data, it's definitely worthwhile.

16 So that's -- in general, in a nutshell, those
17 are the two pilot studies.

18 But the in situ pilot study is basically --
19 right now we're waiting on the final results from
20 Envirogen, who is under U.S. Navy research contract.
21 And they were doing bench scale microcosm studies with
22 MW-7 groundwater and sediment to see if we can add
23 electron donors to the subsurface to reduce the hot
24 spot perchlorate and VOCs in situ. And so based on
25 the results of those tests, we anticipate doing

1 further in situ pilot study, which would basically be
2 injecting these materials into the subsurface to see
3 how they affect reduction of the perchlorate and the
4 VOCs.

5 But that's a little bit further out, because
6 we're still waiting on some laboratory data and we're
7 basically just kind of holding off on that until we
8 can get a better picture of what's really going to be
9 involved in such a study. But we're really
10 concentrating on these two right now also because
11 they're going to affect the type of treatment
12 technology that we put in OU-3. So that's why we're
13 moving forward with the two, the U.S. Filter
14 and the fixed bed reactor.

15 In a nutshell, those are the pilot studies
16 that we're working on.

17 RIPPERDA: Looking at the time line for a fixed
18 bed and U.S. Filter, you're guessing that you're going
19 to finish the fixed bed in February of '01.

20 ZUROMSKI: Yeah. That's probably about two months
21 too much. That's probably -- I'm hoping to get that
22 November or December. But again, that's kind of a
23 cushion for getting the results and getting everything
24 finalized. But what I would like to do is right on
25 the tail end of the U.S. Filter one, which I think

1 ends in -- the actual testing ends in the beginning --
2 toward the end of September, beginning of October,
3 right along the time frame, bring the other guys in,
4 because they will already have done their design and
5 they'll be ready to go into the field at the same
6 time. So we can have -- we can get their 30-day or
7 45-day test in, have their results before the end of
8 the year when -- so we can consider it in our final
9 design for OU-3.

10 RIPPERDA: So comparing that to your plume
11 control, your Arroyo Well --

12 ZUROMSKI: Uh-huh.

13 RIPPERDA: -- you know, you were hoping -- your
14 titles don't mean much to me. Interim Removal Action,
15 does that mean the start of field work? Does that
16 mean --

17 ZUROMSKI: I think that will be start of the --

18 RIPPERDA: -- action memo or, you know, like
19 whatever? But, you know, I'd love to see things as
20 soon as possible.

21 ZUROMSKI: Okay.

22 RIPPERDA: But that being in January, that's not
23 even enough time to have fully evaluated your
24 treatability studies and bought all the large-scale
25 equipment down (UNINTELLIGIBLE.)

1 ZUROMSKI: Right. Again, it's really -- it's
2 pretty preliminary. It's really going to depend on
3 how fast we can get those things going out there. But
4 our end goal is still to try to get a -- some type of
5 treatment system in OU-3 by either the end of '01 or
6 January '02. That's our goal. So how that impacts
7 what we do on our treatability studies is -- we're
8 just going to have to deal with that right now.

9 RIPPERDA: Going back --

10 ZUROMSKI: And meeting that, I don't know.

11 RIPPERDA: Going back to the Calderone bill, you
12 know, I don't think you're going to have a problem.
13 But a lot of people in -- my lawyers would argue that
14 an action is -- the action fits the decision document.
15 For removal action, that is the action memo. And then
16 if you have the action memo saying by December 31st --

17 ZUROMSKI: That's a good point.

18 RIPPERDA: -- you know, that might count as -- he
19 very specifically says "remedial system," which, on
20 the face of it, sounds like, you know, a well --

21 ZUROMSKI: Right.

22 RIPPERDA: -- a treatment unit all in place. But
23 in CERCLA we frequently use the decision document, the
24 beginning of remedial action.

25 ROBLES: Kind of remedial system.

1 RIPPERDA: Yeah. It's kind of a reach, but you
2 might argue that.

3 ZUROMSKI: Right. And if we can argue that,
4 that's something we will push up pretty quickly.

5 ROBLES: Well, there has been discussions to
6 change that date from January '01 to conceivably
7 January '02, because they still have a lot of issues
8 involved in that. So at least gave everybody a time
9 so that they can posture themselves whether there are
10 going to be impacts and prepare themselves for that.

11 If it is pushed to '02, then we're pretty
12 good.

13 RIPPERDA: Yeah. And certainly by November,
14 December you'll absolutely know if this got passed
15 and signed or not or will be passed or signed.

16 ROBLES: Right.

17 RIPPERDA: And even if whenever it is is finally
18 signed, if they make it retroactive, by that point
19 you'll have your system in place, you'll have your
20 agreements with Pasadena and it just won't matter.

21 ROBLES: Right.

22 ZUROMSKI: Right.

23 ROBLES: Okay. That's good because that's what
24 we'll -- we'll work on that, push that.

25 We would like to, if you take back the

1 schedule and look at it and if you feel free to still
2 give us comments on that --

3 ZUROMSKI: Yeah.

4 ROBLES: -- please do.

5 ZUROMSKI: Could you just still give written
6 comments. Or maybe just e-mail me some comments.

7 ROBLES: Mail Richard. So that way he can take
8 down --

9 ZUROMSKI: So that I can kind of take all what
10 we've talked about here today and kind of just --

11 RIPPERDA: I would say read the minutes.

12 ZUROMSKI: Okay. That's fine.

13 RIPPERDA: Everything we said today, I can't
14 imagine sitting down and really picking this apart and
15 trying to --

16 ZUROMSKI: Okay.

17 RIPPERDA: -- generate written comments.

18 ZUROMSKI: And I will fax you guys an updated one
19 after today.

20 Is that -- Richard, were you able -- do you
21 have Microsoft Project?

22 GEBERT: Sure.

23 ZUROMSKI: So you're the only one that can read
24 this one because -- we'll have to get -- I'll just
25 fax. I'll still e-mail it to you, but I'll fax it to

1 you guys.

2 RIPPERDA: Once you've had a few more weeks to
3 tighten up what you can tighten up --

4 ZUROMSKI: Okay.

5 RIPPERDA: -- and do what we've talked about, at
6 that point, you know --

7 ZUROMSKI: Okay.

8 RIPPERDA: -- that gets a little more fixed, I
9 might want to write written comments.

10 ZUROMSKI: Okay. That's fine.

11 ROBLES: That's fine.

12 ZUROMSKI: I think we'll -- what we're going to do
13 is we'll go through what we need to do as far as
14 figure out what contractors we're using, figure out
15 funding mechanism, what's going to happen with the Cal
16 Tech transition plan, and maybe sometime towards the
17 end of July or so we'll be able to actually get
18 something a little more firm to use.

19 ROBLES: And we're going to meet with Mark Good so
20 that we can --

21 ZUROMSKI: Yeah. We're going to be --

22 ROBLES: -- talk about that.

23 ZUROMSKI: Strategize.

24 ROBLES: Try to get this looked at a little more
25 reasonable.

1 RIPPERDA: We had talked about having the
2 regulators meet with you with City of Pasadena.

3 ZUROMSKI: Uh-huh.

4 RIPPERDA: That's something that -- well, you guys
5 have met with them twice now. Would that be any use
6 whatsoever, or you guys got such a good working
7 relationship --

8 ROBLES: Right now it's in the working stage. I
9 would like to keep for the rainy day, so to speak, the
10 issue of meeting together. Because until that, until
11 the City of Pasadena staff presents that to the board
12 or are prepared to present it to the board -- right
13 now I see it as everything is working out good.

14 And the fact is, talking with Ron Palmer
15 today, I let him know what we had been up to and he's
16 very excited about it. He's asking if we, being NASA,
17 could do a briefing to him on what has transpired so
18 far and looked at, because he wants to be as
19 supportive as possible on that site.

20 RIPPERDA: What's the name and phone number of the
21 guy from Pasadena that is your point of contact?

22 ROBLES: It was --

23 ZUROMSKI: Brad Bowman.

24 BURIL: Brad Bowman.

25 ROBLES: Brad Bowman.

1 ZUROMSKI: Do you have his number, Chuck, by
2 chance?

3 BURIL: Not off the top of my head, no.

4 RIPPERDA: Can one of you just -- he's the guy
5 that you always talk about, but I don't have his phone
6 number. If you could just e-mail me his phone number.

7 BURIL: Sure.

8 RIPPERDA: Fine. I'll call him and --

9 ROBLES: We have found that -- I just got a call
10 from Ron Palmer, Chuck, that the -- Hightower is the
11 gentleman running --

12 BURIL: Rufus Hightower. He's the head of Water
13 and Power.

14 ROBLES: He's retiring.

15 BURIL: Oh, really?

16 ROBLES: And I got an interim.

17 BURIL: Oh. Who's that?

18 ROBLES: Who's the deputy there? I can't
19 remember. But anyway, when we meet with the City of
20 Pasadena after the 4th of July, we will be introduced
21 to the interim and they're seeking a new person to
22 replace Hightower. He is retiring.

23 BURIL: Good for Rufus.

24 ROBLES: But the key is that they say there will
25 still be a good relationship. Shah Kwan, who is the

1 head guy there in that area --

2 BURIL: Chief of the Water Department.

3 ROBLES: Chief of the water department, that he
4 said, Ron, just make sure -- Ron Palmer just said
5 "Make sure that you contact Shah Kwan and just let him
6 know what you need so that he can brief up." Because
7 Shah Kwan sits on the Raymond Basin board.

8 ZUROMSKI: So probably we're going to be for at
9 least another -- until the following meeting --

10 ROBLES: Right.

11 ZUROMSKI: -- before we seek your assistance in
12 any way.

13 RIPPERDA: Okay.

14 ROBLES: And we want to keep you apprised of
15 anything that transpires. Right now we see it as a
16 win-win. We're looking forward to it. We're just
17 trying to -- we just want to make sure that -- you
18 know, there's still a lot of issues. The public is
19 very much concerned about the Hahamongna because
20 soccer moms are really ticked off that they're losing
21 their soccer field. So they said "You don't do
22 anything in the Hahamongna project until you get more
23 soccer fields in the rest of Pasadena." So there is,
24 you know, an issue. I know about soccer moms.
25 They're a political force in Southern California. So

1 they have their way. So we're watching this very
2 closely.

3 RIPPERDA: But at least your proposed spreading
4 basins don't impact playing fields at all. Right?

5 ROBLES: No. There's big areas.

6 ZUROMSKI: No. No way.

7 BURIL: At least on the basis of the park
8 conceptual plan --

9 ZUROMSKI: Right.

10 BURIL: -- as it stands today.

11 ZUROMSKI: As it stands today.

12 NOVELLY: Which has not been approved.

13 BURIL: Which has not been approved.

14 NOVELLY: Which is not approved because the soccer
15 moms stopped it.

16 RIPPERDA: But you're so far up field --

17 ROBLES: Right.

18 RIPPERDA: -- and rather steeply sloped.

19 BURIL: We would hope that there will be no issue
20 there, yes.

21 RIPPERDA: Right.

22 ROBLES: One other thing that the folks that came
23 over, there was a John Cox and a Rosa --

24 BURIL: Rosa Laveaga, Gary Takata and Brad Bowman.

25 ROBLES: And Brad Bowman, those four. And it was

1 very clear that they're still, and even though this
2 has been a long process, they're still conceptually
3 designing because they've got lot of issues. One of
4 the things was that they had to move a power line
5 because presently if they fill the water park, the
6 power lines will be under water. So they have to move
7 those. And from what they were talking about, it
8 sounds like they have to have power towers, not just
9 power poles. So that's an issue that they have to
10 talk with Southern Cal Ed.

11 Then you've got the flood control, L.A.
12 County Flood Control. Very tough folks. And have
13 some issues with the way the Hahamongna project is
14 going.

15 I believe that we will be, if we're given
16 permission and get all the hoops through, that we will
17 be doing this even before the Hahamongna Park ever
18 comes into existence. I think it will still be
19 another ten years.

20 BURIL: As a point of reference, when I first got
21 to JPL, they were doing planning for the Devil's Gate
22 Dam Multi Use Project, better known as DGDMUP project
23 at that time. That was in 1990. That turned into the
24 Hahamongna Watershed Park Project. So just in my
25 tenure, close to 10 years, they've been planning and

1 nothing has been approved. So as to whether or not
2 anything happens in the future is anybody's guess.

3 ZUROMSKI: Right. But we were just pushing
4 forward whether or not their plan gets approved.
5 Hopefully by our actions it may help them get their
6 plan approved, but we can't wait for the plan to be
7 approved to meet our own schedule, so --

8 ROBLES: So we're going forward.

9 Any other issues? Any other discussions?
10 Any things that anybody else has?

11 CUTLER: On these subjects?

12 ROBLES: Yes.

13 ZUROMSKI: Sure.

14 CUTLER: We got a call, Phebe was on the phone,
15 about split samples for the groundwater sampling
16 event. And this is something, Judy or Chuck, I don't
17 know if they were contacted.

18 RIPPERDA: By Phebe about the upcoming --

19 CUTLER: Do you guys still want that?

20 RIPPERDA: I haven't -- I've been out of town, but
21 I just e-mailed Phebe yesterday saying "Let's not try
22 for this time, but just -- too quick." I don't know
23 exactly what I'd want to be sampling for, so -- I
24 haven't talked with her, but I told her to not try to
25 arrange for split sampling this time.

1 ROBLES: Okay.

2 CUTLER: We'll try to put -- probably in two weeks
3 we should start sampling.

4 RIPPERDA: Yes. And don't worry about
5 coordinating with us.

6 CARLOS: Can you give us an update on the OU-2,
7 the old one, the SVE?

8 ROBLES: Oh, the SVE. OU-2 SVE?

9 HOSANGADI: Yes.

10 ROBLES: Update.

11 HOSANGADI: Oh, update. Okay. Basically we are
12 just operating from screen C, which is the deeper
13 screen. We had shut the system off about a couple of
14 weeks before we took the most recent sampling event
15 which just got finished. We started it back up
16 yesterday afternoon. And what we were doing is we
17 collected a sample of the extracted vapor a day or two
18 before we shut the system down and we'll be collecting
19 samples today and tomorrow just to see how much
20 rebound there is, if any. And we'll also be looking
21 at the soil vapor data that we collected from this
22 round that was recently completed, compare it with the
23 previous ones and see what decrease there has been
24 since the previous sampling round.

25 CARLOS: How much mass is there so far? Do you

1 know?

2 HOSANGADI: I don't remember offhand, but --

3 CARLOS: Last time it was about 1200.

4 HOSANGADI: Yeah. It's gone up a little bit more
5 beyond that, but not too much more. We are very close
6 to the asymptotic range right now.

7 BURIL: We have knocked a considerable hole, if
8 you will, in the concentrations. Where we've seen
9 wells that started in the hundreds, we're now down to
10 the low ones.

11 HOSANGADI: Right.

12 BURIL: So we have really taken a large hit in
13 terms of the mass out of that thing. As far as
14 continuation of that goes, that's up to Peter and
15 company and we're still deciding how that's going to
16 happen. But it's going to be continued at least out
17 until the point in time that the project is turned
18 over. And then after that is in essence
19 (UNINTELLIGIBLE).

20 ROBLES: What we're looking at is some contractual
21 mechanism to continue this project in one form or the
22 other. And that's what we're trying to do. We
23 want -- we'd like to see that continue on. As long as
24 there's a mass out there and it can be -- the system
25 can be worked, we want to continue.

1 RIPPERDA: That is the major point of your OU-2
2 draft-final FS is how to scale without turning into a
3 real -- at this point it's like if you're that close
4 to asymptote or you're at asymptote and you're going
5 to be going large scale within the year -- well, and
6 if it costs next to nothing to continue operating,
7 continue operating, but --

8 BURIL: It couldn't wait.

9 RIPPERDA: What?

10 BURIL: It couldn't wait. Keep building it.

11 ROBLES: Anything else? Any other comments?

12 BURIL: I have one other thing I'd like to say,
13 something totally different from the project which
14 we've been discussing, but one that, nonetheless, has
15 tremendous impact.

16 Since what, B.G., 1988, '89 time frame that
17 you've been working on the project?

18 RANDOLPH: Basically '90, late '90, early '91.

19 BURIL: Basically about ten years now, B.G.
20 Randolph has been working on our project here and he
21 has done incredible work with regard to identifying
22 sources. He's been the leading force in a lot of the
23 work, particularly in Operable Unit 2.

24 B.G. has elected to retire and tomorrow is
25 his last day. And I want to take a moment and say

1 thank you on behalf of JPL and on behalf of Cal Tech
2 for all the great work that you've done. It's been a
3 great contribution.

4 RANDOLPH: Thank you very much. I appreciate that
5 comment.

6 ROBLES: So now where are you going? Alaska?

7 RANDOLPH: I'll be hanging around for about a year
8 just finishing up a list of -- long, long, long
9 laundry list of things that needed to be done over the
10 last number of years. That list is written in very,
11 very fine print. It's going to take me a while to get
12 to a point where I can actually think about getting
13 closer to the kids and grand kids, which are about a
14 thousand miles away.

15 ROBLES: We wish you a lot of luck and we enjoyed
16 working with you and hope the best. And you left your
17 indelible imprint on the project.

18 RANDOLPH: Thank you very much.

19 ROBLES: It's been really a pleasure.

20 BURIL: Just do me a favor. Leave some ducks and
21 fish for my retirement. Okay?

22 RANDOLPH: Will do that, sir.

23 ROBLES: Any other comments or anything else?

24 ZUROMSKI: Next meeting or action.

25 BURIL: There were no action items from the last

1 meeting.

2 ZUROMSKI: No. Okay.

3 ROBLES: The only action items that I know we have
4 for now is that we owe you guys a letter for the
5 extension for the OU-2 FS. And we owe you a redone
6 schedule.

7 And what date do we want to set for --

8 ZUROMSKI: You guys want it by a certain time or
9 should we just kind of --

10 Mark, we're going to get together in a couple
11 weeks, so we'll probably -- would you say somewhere
12 toward the end of July we could probably get a better
13 draft schedule off to them?

14 GOOD: If we can meet here early part of July,
15 middle, late July.

16 ZUROMSKI: Okay. So why don't we shoot for the
17 last week in July right now just so we can make sure
18 we get something to them. Probably the same day as
19 the FS, the 28th of July.

20 GOOD: That would be good.

21 ZUROMSKI: Okay. So we'll -- so on the same day
22 that you'll be getting our better revised draft
23 schedule for maybe more official comments, July 28th.

24 CARLOS: Are we still scheduled for that telecon
25 next week?

1 ZUROMSKI: Yeah. I don't know if that's necessary
2 or not. I mean, do you guys think -- we've pretty
3 much covered everything we needed to cover today.

4 BURIL: I don't think there's going to be anything
5 significant that happens between then and now.

6 ZUROMSKI: I think we have that just as a
7 contingency if we needed to discuss something before
8 Richard went on vacation.

9 RIPPERDA: He's got a whole week to work between
10 now and then.

11 ZUROMSKI: Okay. I guess -- should we schedule
12 the next meeting?

13 ROBLES: Yes. When would be the next meeting?
14 We're looking at the next quarter. That would be --

15 BURIL: Officially we don't need to meet until
16 October.

17 ZUROMSKI: We probably want to meet --

18 BURIL: However, given the situation, I would
19 suggest that we meet sooner than that.

20 ROBLES: I would suggest September.

21 ZUROMSKI: Yeah, either August or September. I
22 mean you guys are going to have time to -- when you
23 get the schedule the end of July you'll probably have
24 comments and --

25 BURIL: My suggestion would be somewhere toward

1 the end of August, beginning of September --

2 ZUROMSKI: Okay.

3 BURIL: -- to give them opportunity to review the
4 materials that have been submitted and then work
5 around whatever schedules they have.

6 ZUROMSKI: Plus, we'll have some results from --
7 pilot studies will be --

8 BURIL: Hopefully underway then.

9 ZUROMSKI: -- underway too.

10 RIPPERDA: I would say the end of August might be
11 best. We're getting the draft FS, draft-final FS July
12 28. It goes final August 28.

13 ZUROMSKI: Okay.

14 RIPPERDA: If we want a chance to ask for a few
15 informal changes --

16 ZUROMSKI: Uh-huh.

17 RIPPERDA: -- it would be nice to meet --

18 ZUROMSKI: Okay.

19 RIPPERDA: -- a little before that.

20 ROBLES: Would you want the third week in August,
21 the 21st?

22 ZUROMSKI: The week of the 21st?

23 RIPPERDA: You need time to review it. You can
24 always go final. (UNINTELLIGIBLE.) You don't
25 actually issue in hard cover a final until several

1 weeks after August 28 anyway. So I would think --

2 ROBLES: Do you want the 28th of August?

3 BURIL: I would think the week prior would be
4 helpful in case they do have comments on the
5 draft-final. Of course, one of the things I would
6 hope you fellows would do for us is if you do make
7 comments on the draft-final, that as soon as you have
8 them understood and capable of being communicated to
9 us, call us.

10 RIPPERDA: Right.

11 BURIL: Let's not wait until the face to face,
12 because if they are something we can incorporate
13 rapidly, we'd like to do so.

14 ZUROMSKI: It would either be, then, the week of
15 the 21st or the 28th.

16 RIPPERDA: Right. The week of the --

17 ZUROMSKI: 21st.

18 RIPPERDA: -- would be --

19 ZUROMSKI: Do we usually meet on a Thursday?

20 RIPPERDA: Right.

21 BURIL: Thursdays have been kind of the --

22 ZUROMSKI: Thursday, the 24th.

23 BURIL: -- status quo.

24 ROBLES: Would that be okay, the 24th?

25 CARLOS: That's fine.

1 GEBERT: Sounds good.

2 ZUROMSKI: Are you back from vacation?

3 GEBERT: Yes. A long time.

4 ROBLES: We'll meet here, 9:30 again, the 24th.

5 RIPPERDA: Yeah. I would --

6 ZUROMSKI: Do we want to meet up in -- somewhere
7 different this time? In San Francisco or -- I mean,
8 it's up to you guys.

9 RIPPERDA: Everybody wants to go to San Francisco.

10 ROBLES: We all want to.

11 ZUROMSKI: We don't want to fly through there so
12 how about we just come down here.

13 ROBLES: So the 24th here, same time.

14 ZUROMSKI: 9:30.

15 ROBLES: 9:30.

16 ZUROMSKI: Okay.

17 RIPPERDA: There's a chance I might be on vacation
18 then, but I will check with my wife and let you know
19 in the next couple days.

20 ROBLES: Okay.

21 BURIL: You have to check with the boss.

22 ROBLES: That's right.

23 BURIL: Don't worry. I have a boss too.

24 ROBLES: All right. Any other items?

25 I know that we have a schedule to give to you

1 and a letter for the FS OU-2. And that's about it.
2 Then we'll schedule that meeting.

3 If there's any issues, anything that you want
4 to send to us, please feel free. This is a critical
5 time. We want to make sure we get everything
6 together.

7 Any other comments? Anybody has any other
8 issues or anything else?

9 We are adjourned, then.

10 (At 11:12 a.m. the meeting concluded.)

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MEETING ATTENDANCE RECORD

NASA/JPL SUPERFUND SITE

RPM Meeting

29-Jun-00

Please print the information requested below and pass this sheet along to the next person. Thank you.

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