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TRANSCRIPT OF PROCEEDINGS
NASA/JPL CERCLA RPM MEETING
TUESDAY, NOVEMBER 15, 2005
FOOTHILL MUNICIPAL WATER DISTRICT
4536 HAMPTON ROAD
LA CAÑADA FLINTRIDGE, CALIFORNIA

- 1 APPEARANCES:
- 2 KEITH FIELDS - BATTELLE/NASA
- 3 STEVE SLATEN - NASA
- 4 MERRILEE FELLOWS - NASA
- 5 MARK RIPPERDA - U.S. EPA
- 6 LORI GARNER - BATTELLE/NASA
- 7 DAVID CLEXTON - BATTELLE/NASA
- 8 NICK AMINI - BATTELLE/NASA
- 9 STEFAN CAJINA - STATE HEALTH DEPARTMENT
- 10 ALAN SORSHER - CALIFORNIA DEPARTMENT OF HEALTH SERVICES
- 11 ROUMIANA KARAKONOVA - PASADENA WATER & POWER
- 12 BILL PECSI - FOOTHILL MUNICIPAL WATER DISTRICT
- 13 BOB HAYWARD - LINCOLN AVENUE WATER COMPANY
- 14 JUDY NOVELLY - JPL
- 15 SUSAN SANTOS - FOCUS GROUP/NASA
- 16 TONY ZAMPIELLO - RAYMOND BASIN MANAGEMENT BOARD

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1 La Cañada, California, Tuesday, November 15, 2005

2 1:12 p.m.

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4 MR. SLATEN: We usually start with introductions
5 around the room.

6 Steve Slaten, Remedial Project Manager for
7 NASA JPL.

8 MR. RIPPERDA: Mark Ripperda with the US EPA.

9 MR. FIELDS: Keith Fields, F-i-e-l-d-s, with
10 Battelle.

11 MS. LORI GARNER: Lori Garner with Battelle.

12 MR. CLEXTON: David Clexton, Battelle,
13 C-l-e-x-t-o-n.

14 MR. AMIDI: Nick Amini, Battelle, A-m-i-n-i.

15 MR. CAJINA: Stefan Cajina, State Health Department.
16 That's S-t-e-f-a-n C-a-j-i-n-a.

17 MR. SORSHER: Alan Sosher, Department of Health
18 Services.

19 MS. KARAKANOVA: Roumiana Karakonova, Pasadena Water
20 and Power.

21 MR. PECSI: Bill Pecsí, P-e-c-s-i, Foothill
22 Municipal Water District.

23 MR. HAYWARD: Bob Hayward, Lincoln Avenue Water
24 Company.

25 MS. NOVELLY: Judy Novelly, N-o-v-e-l-l-y, JPL.

3

1 MS. SANTOS: Susan Santos, Focus Group.

2 MS. FELLOWS: Merrilee Fellows with NASA, Manager of
3 Outreach, M-e-r-r-i-l-e-e.

4 MR. TAKARA: Gary Takara, Pasadena, T-a-k-a-r-a.

5 MR. SLATEN: Most of us know each other and have
6 seen each other plenty of times. Susan Santos may not
7 be familiar to everybody, and Merrilee went and picked
8 her up at the airport today. She's coming in for our
9 public meeting tomorrow night. She helps us with our
10 outreach efforts.

11 I'll go ahead and jump into the agenda, then,
12 and get started.

13 We had OU-3 up first. Then we had left public
14 involvement a little later on the agenda because we
15 didn't know when Merrilee might get back from the
16 airport. So it's a little different order than we often
17 do. So let's go ahead and just get started.

18 Talking about the Lincoln Avenue Water System,
19 Usually, we let Bob just talk about it. I'll just go
20 ahead and say that we're setting up to do water level
21 monitoring at Lincoln Avenue wells and MW-17.

22 As Bob's shutting off his Lincoln Avenue Well
23 No. 3, it gives us a good opportunity to watch the
24 rebound and get better aquifer characteristics for all
25 of our planning out there.

4

1 So we set up equipment to do baseline readings.
2 The well's supposed to be shut down the 16th for a day
3 and then restarted, and then we'll watch the rebound.

4 Bob, do you have anything else?

5 MR. HAYWARD: No.

6 MR. SLATEN: Is there anything else on Lincoln
7 Avenue? Is this the only slide?

8 MR. FIELDS: Well, you know, we typically give Bob
9 the opportunity to just give a status update of how the
10 system's operating.

11 MR. HAYWARD: I shared with Steve. I was hoping
12 that he would pass them out.

13 MR. SLATEN: I can.

14 It looks like Bob brought copies of the carbon-
15 tet graph for the last couple of months as well as the
16 perchlorate. So there's -- looks like maybe there's
17 about ten copies.

18 Do you want to go ahead and hand those in that
19 direction?

20 It doesn't look like there's any big surprises
21 on here, are there, Bob?

22 MR. HAYWARD: Not really, Steve. You know, when
23 I -- when I looked at these yesterday -- yesterday, I --
24 the first thing that came to mind was what was our
25 concern and maybe our fear maybe a year ago. It hasn't

5

1 materialized. And that is we are satisfied now that
2 carbon-tet has become the lead VOC as far as the
3 migration of the contaminant off the site, and the
4 management challenges, you know, that we have to deal
5 with when we deal with carbon-tet and GAC absorption.

6 That's another issue that Steve, Keith, and I
7 will probably be talking about.

8 And what it shows me is that, as far as I can
9 see right now -- good thing about it, we're not seeing
10 any spikes, but we are seeing a continuous steady slight
11 increase in concentration. It's on a slight incline,
12 and I don't think that's going to change. If we don't
13 change our pumping and treatment strategy, we're going
14 to see that trend just continue.

15 And, you know, you can look at the perchlorate
16 graph. It appears to be similar. Just a steady slight
17 increase in concentrations. As we -- as we produce the
18 water, fortunately, as far as treatment capacity, the
19 IX system is working, I consider, better than
20 anticipated. But I'm not going to go back in history
21 about what was anticipated as far as resin life and what
22 we got, but it is working above the expectations. And
23 it's the carbon-tet and the liquid phase -- the
24 absorption that is our primary concern right now.

25 MR. FIELDS: Bob, at the last meeting, we discussed

6

1 some operational changes that you guys were doing with a
2 different type of activated carbon.

3 Has that improved your run times?

4 MR. HAYWARD: Keith, you know, I brought that chart
5 with me also, but it's a little bit confusing because we
6 talk about a run as far as the carbon is concerned,
7 virgin versus regene[rated], loading, run time, vessel 1
8 through 4, flow through particular vessels, so it's kind
9 of complicated.

10 But just to answer your question as simply as I
11 can, I don't think we gained anything by making the
12 switch to a virgin and paying the markup on that --
13 that carbon. And I want to go over those -- that data
14 with you because I don't think we gained anything.
15 We're still where we were at.

16 MR. FIELDS: Paying more, but getting the same run
17 time.

18 MR. HAYWARD: Yes.

19 And with the carbon-tet now, depending on how
20 high the concentration goes up and paying the same or
21 paying more and getting less than -- getting less to the
22 point where, you know, you stop balancing out the cost
23 effectiveness.

24 MR. FIELDS: Uh-huh.

25 MR. SLATEN: Okay. Is that all about Bob's system?

7

1 MR. FIELDS: We have a couple of graphs here, just
2 summary type information that we typically present.

3 Based on our calculations, Bob's processed
4 about 3,000 acre feet since the ion exchange unit went
5 on line: Over 125 pounds of perchlorate removed, almost
6 15 pounds of carbon-tet, and approximately 130 pounds of
7 TCE.

8 An extended version of the graphs that Bob
9 handed out.

10 And this is Lincoln Avenue No. 5.

11 So if we look at long-term trends with Lincoln
12 Avenue No. 3, we are seeing the highest levels of
13 perchlorate and carbon-tet that have been observed
14 throughout its operational history.

15 For No. 5, they're around the same range that
16 we've been seeing over the past five or six years.

17 MR. SLATEN: And as Bob pointed out, in the last
18 year the -- I guess the good news is the upward trend
19 has been very slight, almost flat. As a matter of fact,
20 later, when we show -- for MW-17, when we show the
21 results, it looks like maybe it's curved down a little
22 bit, just upgraded from Bob's. So that will come up
23 later. We have a slide on that. So keep that in mind.

24 MR. FIELDS: This is it.

25 MR. SLATEN: Oh, that's it. Okay.

1 If you believe in trends over just a couple --
2 a few months, MW-17, just a few hundred feet upgradient
3 of Bob's Lincoln Avenue Well No. 3, it is showing --
4 seeming to show maybe a downward trend in the
5 perchlorate levels, which, you know, it's not -- it's
6 kind of what we had expected things have been moving in
7 Bob's direction for a while. Maybe -- maybe the higher
8 level has already -- front has already moved on past.

9 MR. FIELDS: This well --

10 MR. SLATEN: MW-17.

11 MR. SORSHER: Is there -- have you guys had an
12 estimate of the time of travel between MW-17 and Lincoln
13 Avenue Well 3?

14 MR. SLATEN: We'll probably have a real good one
15 after the rebound test the next few days. You know,
16 that area is heavily influenced by the pumping in 3. So
17 I would think it's fairly quick travel time, probably
18 less than a year between the two.

19 MR. FIELDS: Back in -- when we went through the
20 permitting process and got the Lincoln Avenue system on
21 line, the estimates that we had were about a year.

22 MR. SORSHER: Okay. And I also noticed, you know,
23 in talking about 17 and Lincoln Avenue Well 3 -- I don't
24 have the diagram in front of me right now -- but in your
25 groundwater monitoring report, you also had a

9

1 cross-section running from JPL, across the Arroyo,
2 through MW-17 and MW-3.

3 Is that all jiving with this data that you see
4 at Lincoln Avenue 3?

5 MR. SLATEN: Yes.

6 MR. FIELDS: I think it all makes sense together.
7 Certainly, we're seeing -- since MW-17 measures
8 concentrations at specific intervals throughout an
9 aquifer and Lincoln Avenue is pulling across the broad
10 range of that aquifer, we would expect to see something
11 lower in MW- -- in Lincoln Avenue 3 than we do in the
12 highest port within MW-17. So it seems to be making
13 sense.

14 MR. SLATEN: Next.

15 Keith, do you want to talk about this a little
16 bit while I finish my sandwich?

17 MR. FIELDS: Yes.

18 Battelle does a lot of work for the
19 Environmental Protection Agency out of their research
20 lab, which is in Cincinnati. It's called the NRMRL --
21 National Research Management Laboratory of some sort.

22 Anyways, we won a contract recently to support
23 their evaluation at a pilot scale level for some new
24 media to remove perchlorate and also arsenic
25 simultaneously.

10

1 As part of that, there are two sites
2 identified. One site was in Arizona, and another site
3 they wanted to get in California. We had proposed
4 working with Lincoln Avenue to do a pilot scale test
5 there. And we met with Bob and Ann, and they are in
6 agreement that we can do a test there with the EPA.

7 But what we would be looking at is a hybrid ion
8 exchange media that would remove both perchlorate and
9 arsenic and then also the tailored GAC. We've talked
10 about it before, but tailored GAC is a potential benefit
11 to Lincoln Avenue and to other systems that we have
12 associated with JPL as far as reducing the cost of
13 operation. This is something that's been studied quite
14 a bit, but it needs to take those next steps to get the
15 approval of DHS and the environmental community.

16 So this study, through the EPA that Battelle's
17 doing, I think is just something that we wanted to let
18 you know about that we were going to do. It's a
19 benefit, I think, to our program. It doesn't -- the
20 costs are being paid out of EPA's budget, not NASA's.
21 NASA does have the opportunity to evaluate whether or
22 not they would like to take additional samples that may
23 benefit their program above and beyond, but we just
24 wanted to mention this to everyone, that this study is
25 underway, or this study is being considered.

11

1 And a couple of things that would be of notice
2 that we will be spiking the influent water with some
3 arsenic so that we can observe the removal of both
4 perchlorate and arsenic.

5 These columns -- you can see these columns here
6 on the wall. They're two-inch diameter and six-foot
7 long of relatively low flow rate, maybe less than 500
8 gallons per day. And then we would be planning to
9 discharge the treated water through the storm sewer.

10 And it -- what we're looking at now is about a
11 nine-month pilot scale study. So just wanted to let
12 everyone know that we are planning to do this and that
13 the results should -- you know, that we'll report the
14 results as part of these meetings, and they should have
15 some value to decisions that we take as we move forward
16 here at JPL.

17 MR. CAJINA: You guys planning to give us a study
18 protocol on that?

19 MR. FIELDS: Yeah. I guess that was sort of the
20 question. What is -- what would DHS like to know? I
21 mean, I don't -- when we go into these things, we've
22 done a lot of these types of studies throughout the
23 country. Sometimes the state agencies like to be very
24 involved; sometimes they don't. Sometimes --

25 MR. CAJINA: To a large extent, it's up to you.

12

1 Since you're pumping the waste, we don't really have
2 anything to say about it other than it's a good idea if
3 this is going to be used for drinking water treatment in
4 the future, to make sure that our questions get answered
5 as part of the study. So I'd suggest giving us a study
6 protocol. And we will give that to our water treatment
7 committee and see if they have anything else they would
8 like to see. But it's probably a good opportunity to
9 answer a lot of questions up front.

10 MR. FIELDS: Okay. And certainly, from JPL's
11 perspective, or NASA's perspective, we would like -- if
12 tailored carbon ends up being a more cost effective and
13 effective treatment for perchlorate, we would like to
14 coordinate that through DHS.

15 So when we -- when Battelle prepares these work
16 plans, I'll let our folks know that you would like to
17 see copies of the plans.

18 MR. SORSHER: And, once again, what is your time
19 frame for the testing?

20 MR. FIELDS: There's quite a bit of pre-evaluation
21 that needs to be done, some laboratory scale
22 experiments. I think this nine-month study would start
23 sometime mid next year, potentially.

24 Any other questions on that?

25 Anything you'd like to say, Bob?

13

1 MR. HAYWARD: Yeah. I guess this is a scoop for
2 everybody. If you've got some disposable money, I would
3 advise you to buy U.S. Filter stock right now.

4 MR. FIELDS: U.S. Filter has the -- has purchased
5 the patent rights or whatever to the tailored GAC.

6 MR. SLATEN: Okay. Moving along, talking about the
7 City of Pasadena system update, this is, you know, the
8 OU-3, the cooperative approach that we've been
9 working -- talking to the City of Pasadena about.

10 What this keys off of -- what happens next keys
11 off of when we have -- actually have a signed agreement
12 between the City of Pasadena and Caltech, supported by
13 NASA, to fund the treatment system for the Monk Hill.

14 So all these dates, of course, go to that. I
15 hope we're very close. City Council still has to meet
16 and approve and that's probably not happening for a
17 couple of weeks or so. They've been working on it for
18 quite a while now, and we're right down near the end.

19 So there's a proposed plan for the OU-3 or the
20 off-facility Monk Hill cooperative approach, which needs
21 to go out to the public after it goes out to an internal
22 RPM review. And the internal RPM review is not even on
23 this calendar because it's an internal type review.

24 And so that keys off lots of things happening
25 in the CERCLA process. It also -- there's DHS

1 permitting activities that will need to be going along
2 in parallel.

3 Then, because it's being constructed by the
4 City of Pasadena on the City of Pasadena property, there
5 are City of Pasadena's review processes that need to
6 be -- that need to fit into the schedule. And then
7 there's the vendor and engineering-type designs.

8 I didn't give this, you know, to you so
9 everybody could comment now on all the specifics but to
10 let you know that there's a big, fairly complicated
11 schedule out there for getting -- for getting water
12 delivered that right now is out about mid 2007, if
13 things go fairly well, before it's turned on and serving
14 clean, potable water for the City of Pasadena customers.

15 MR. SORSHER: Can we get a copy of this slide,
16 perhaps by e-mail or something?

17 MR. SLATEN: Yeah. We -- we can send it to you. I
18 would just caveat it that I've got another one that has
19 150 items like this on it with the detail. We tried to
20 break out some of the big ones.

21 There's also -- the important thing is where is
22 the critical path, which things come -- need to come
23 when?

24 For example, for DHS, we've had the 97-005
25 stuff to you for a while, but we haven't been beating on

15

1 your door because you're not on the critical path yet
2 right now.

3 So there will come times when there are things
4 that are on the critical path where I will be beating on
5 peoples' doors to try to keep them moving along because,
6 otherwise, we won't be turning the thing on in the
7 middle of 2007.

8 So yeah, we can get this to you. As a matter
9 of fact, I'll show -- I can be showing people the more
10 detailed critical path and where things are so different
11 parties here know when it's important for them to
12 schedule their resources and be ready to jump on stuff.

13 MS. FELLOWS: I would request that you put a watermark
draft on it before you release it.

15 MR. SORSHER: Okay.

16 MS. FELLOWS: Because this is just way, way draft.

17 MR. SORSHER: Right.

18 MS. FELLOWS: And --

19 MR. FIELDS: And we may want to wait until we -- so
20 many things are hinged on that first signing of the
21 agreement.

22 MR. SLATEN: Yeah. I mean, actually, the one little
23 question mark up there, I said "Keith, maybe we better
24 put a question mark at the front, the first one, and
25 show that they all follow question marks after that."

16

1 MS. FELLOWS: Question mark plus n plus question
2 mark.

3 MR. SLATEN: Right. Right. And -- so just wanted
4 to kind of give people the big picture here.

5 MR. SORSHER: So there has been a tentative
6 agreement with the City then, huh?

7 MR. SLATEN: There's -- I guess you could say it's
8 tentative in that it's waiting for City Council
9 approval. And there are a couple of little details that
10 are still being worked on that -- where it can't come up
11 for a vote probably for a couple of weeks.

12 MR. HAYWARD: Steve, just a comment that, you put it
13 up there, and it's obvious to me that you put it up
14 there for a reason, even though you don't have the most
15 important line item up there, that is, the agreement. I
16 mean, so -- but you see the problem with putting
17 something like that up there is that I focus on that
18 delivery water date, and I want to know plus or minus
19 what? I mean, because that's crucial to me.

20 So, I mean, is that just for show, or do I look
21 at that May of '07 and say that's -- that's my due date
22 or target date or drop-dead date, if you understand what
23 I'm talking about?

24 MR. SLATEN: Let me talk a little bit about that
25 date because I hate to promise things I can't deliver.

17

1 I mean, we were working on a date, you know, a few days
2 ago when we thought perhaps we would have an agreement
3 at the City Council vote by now. So it's already
4 slipped a little bit, some days or weeks.

5 Within the schedule, then, there's 150 other
6 items that all have to happen at a certain time in
7 relation to all the other items. We have built a
8 schedule that is moderately -- that is moderately
9 difficult to meet already. This is not padded. This is
10 not a date that I put out there that I know that we can
11 beat it.

12 There are probably some places in the schedule
13 where we could work together to try to shave a week
14 here, a week there, a day here, a day there. And I
15 definitely want to do that whenever possible to try to
16 move that date forward, if I can. If nothing else, if
17 something else slips, perhaps overall, if we can move a
18 few things forward, we can keep the overall date.

19 As far as a planning date, it's a date that I
20 would love to plan on to be delivering water. There are
21 several aspects of the schedule outside of my direct
22 control.

23 MR. HAYWARD: I understand. So I won't belabor it.
24 But we'll talk later on about how firm is that May of
25 '07.

18

1 MR. SLATEN: I think we're going to continue to talk
2 about that, yeah. Hopefully, the further along we get,
3 the more firm we have the date.

4 MR. HAYWARD: Gary, do you want to second that?

5 MR. TAKARA: Everything what Steve said, I have no
6 comment. I mean, I'll put it to you this way; right? I
7 mean, both NASA and Pasadena have been working on this
8 schedule, and a lot of it depends on some of these
9 critical path issues, one of which is the agreement.

10 May 2007 is the date that's been proposed by
11 NASA, and Pasadena supports it in all ways possible.
12 And we are trying to find things to do in parallel --
13 parallel track here, and if we have to compress some
14 schedules, we are.

15 The City Manager had spoken to the planning
16 department to put the necessary resources to getting
17 this -- for example, the CEQA requirements fulfilled and
18 completed. So we do have City folks already started
19 some of this process, even though we don't have an
20 agreement signed outside of Water and Power.

21 So I don't see May 2007 being out of the
22 question. It's possible. Right now, because the
23 agreement isn't signed and there are so many tasks that
24 have to be answered -- as Steve mentioned, 150 tasks, at
25 least -- and it's not just Water and Power. It's, of

19

1 course, DHS and everyone else that's -- they're adding
2 input to it too. So like I said, 2007 May, I'm for it,
3 not against it.

4 MR. SLATEN: The City Manager has pledged to give
5 her influence to making things happen as quickly as
6 possible, so that's an important point because everybody
7 at the City works for her. So I think we're going to
8 get off on the right foot once we get this thing signed.
9 We're already working as though it's signed. We're
10 working closely together. But I cannot -- I cannot send
11 out the proposed plan for review until it's signed. I
12 just -- I cannot. I've -- I've looked for ways to try
13 to do that, and it's not possible. And that's on the
14 critical path because that -- those pieces of the CERCLA
15 process have to be done before certain other things are
16 done.

17 MR. HAYWARD: Just one last question. Are you
18 planning on introducing us to the general public
19 tomorrow night?

20 MR. SLATEN: No. No. If people want to ask
21 questions, we'll definitely answer questions. But
22 tomorrow night's meeting is about the OU-1 on-facility
23 source area expansion.

24 MR. HAYWARD: Okay.

25 MR. SLATEN: And that's what it's going to be

20

1 focused on, and that's what I'll -- I'll be -- do all
2 the explaining.

3 If people want to ask about other things,
4 bigger -- I'll talk a little bit about the bigger
5 picture and about how we are doing the different things
6 and how, in the future, they're going to fit together in
7 a final proposed plan record decision that takes a
8 holistic look at the groundwater. But tomorrow night's
9 meeting is not about OU-3. It's premature. We don't
10 have an agreement.

11 On the nitrate study -- I think we talked about
12 this last month. I think it's just kind of a rehash.
13 This was the pumping and nitrate study that we did on
14 the Pasadena Monk Hill wells.

15 Bottom line is we don't -- bottom line is we
16 think there has been some influence of La Cañada
17 groundwater that has brought some nitrates a little
18 further north than they used to be when pumping was
19 going on, but we don't think that will be a severe
20 impact to being able to put the Monk Hill wells back on
21 when we're able -- when we pump them all. Nitrates tend
22 to be higher down to the south where there's more impact
23 at the Windsor well from the flow of La Cañada
24 groundwater.

25 MR. TAKARA: Keith, the comments that Pasadena

21

1 has -- or had, it has already been incorporated, so I'll
2 just go ahead and forward that e-mail for that site to
3 Alan.

4 MR. FIELDS: Okay.

5 MR. TAKARA: So then you can go ahead and take a
6 look at that report on the nitrate on the Windsor
7 project.

8 MR. FIELDS: And the plan is to incorporate this
9 evaluation into the 97-005 documentation.

10 MR. SORSHER: Yeah. And, in fact, I don't exactly
11 remember exactly when it was, but we had some high
12 nitrate levels showing up in our DHS database
13 historical, and it looked like those were incorrectly
14 attributed to the wells. Apparently, they were
15 connected with some other water tunnels or something.

16 MR. TAKARA: Right. We passed those comments on
17 to --

18 MR. SORSHER: Yeah.

19 MR. SLATEN: This is the additional investigation,
20 the RI addendum where we're using the stable isotope
21 analysis to try to give us a fingerprint, if you will,
22 of chemicals and where their origins might be. We've
23 taken all the samples. They're off at mostly university
24 labs which have a many-month turnaround where we're
25 waiting for the results.

22

1 I'll let you know, you know, in February how
2 that's going. Next year, maybe middle of next year, but
3 sometime next year, I hope to have all that together and
4 evaluated so that we'll have it to talk about, and we
5 can add it to the 97-005.

6 And Gary, we put you down for Sunset Wells'
7 update.

8 MR. TAKARA: Sure.

9 Before I discuss anything on Sunset, I want to
10 ask Alan: On the 97-005 document, there was one task
11 under that report where we have to go through a public
12 hearing.

13 Can you clarify -- is it a public hearing or a
14 public comment period that we go through?

15 MR. SORSHER: Well, I think what you had there, what
16 Steve -- on his -- his chart there, was a public hearing
17 for the -- related to the permit. I think -- I have a
18 copy of it here. I can just check.

19 But, you know, if it's a controversial
20 permit -- and most of our -- you know, typically, our
21 permits are not that controversial, but we do have --
22 let me see what it says here.

23 Yeah. It's listed here as item -- item 9,
24 after submission of a permit application.

25 So, you know, it would be a permit -- a permit

23

1 hearing. It would be a public hearing, actually, a
2 formal hearing, not a meeting, as part of our
3 administrative procedure in making a permit decision.

4 MR. RIPPERDA: So is that in front of a board, or is
5 that kind of like we do our meetings for CERCLA where,
6 you know, the public's out there, and you make the
7 presentation to the public?

8 MR. SORSHER: Well, it's in front of the public.
9 You know, we -- we'd invite, you know, the local
10 officials, the City officials, or any other officials
11 that have any comments.

12 MS. FELLOWS: And who hears it?

13 MR. SORSHER: Huh?

14 MS. FELLOWS: Who hears it? Who's the body --

15 MR. SORSHER: Our management would hear it.

16 MR. CAJINA: The hearing officer will likely be our
17 branch chief for Southern California.

18 MR. SORSHER: So, you know, that was pretty much
19 covered on the item that you had on your table there.

20 MS. FELLOWS: And do you have that locally in the
21 area where the process is run?

22 MR. SORSHER: Absolutely. Absolutely. We'd
23 probably work with you and --

24 MS. FELLOWS: Good.

25 MR. SORSHER: Because, as it is, we don't do it very

24

1 often, and, in fact, most of our people have never done
2 one.

3 You know, when we did the permit for the
4 Glendale OU five years ago now, we had their library one
5 evening. It was quite a large room. We didn't have a
6 huge turnout.

7 MR. SLATEN: There's going to be lots of public
8 involvement with this process between --

9 MS. FELLOWS: Not on the schedule we have.

10 MR. SLATEN: On the detailed schedule?

11 There's quite a bit of public involvement
12 between what NASA needs to do, what the City of Pasadena
13 needs to do. And there's going to be -- we're doing
14 this as an interim action, later to be followed up by a
15 final ROD. So there are a couple of opportunities here
16 in the next year and a half for interaction, just in the
17 CERCLA process.

18 MR. SORSHER: Right. Well, I noticed the public
19 meeting in late January on the proposed plan is coming
20 up.

21 MR. SLATEN: That's the earliest --

22 MR. SORSHER: So that -- that's great. Because that
23 will get the public involved. We'll, hopefully, become
24 aware of their concerns. And if we have to make any
25 changes or keep their concerns in mind as we go through

25

1 the next year --

2 MR. SLATEN: I think, between everything that's
3 happening with public involvement in the next year on
4 this, this is going to be a very well-vetted, no-secrets
5 type of project.

6 MR. SORSHER: Right.

7 Gary, on your CEQA process for this, CEQA can
8 also have a hearing. I know, when I was with toxics, we
9 would combine the CEQA hearing and the permit hearing as
10 one public hearing and hear both together, as I recall.

11 Is there a CEQA hearing that -- for the CEQA
12 process that you know of?

13 MR. TAKARA: Yeah. We started the -- we started the
14 ini- -- the process going for the CEQA review.

15 Nick is drafting the -- has already drafted the
16 initial study and sent it to our planning folks for
17 review.

18 I always get the two confused. Are we having a
19 public hearing, or just a public comment for the CEQA?

20 Do you recall what Jennifer mentioned?

21 MR. AMINI: I think it's a public hearing.

22 MR. TAKARA: Okay. I can't recall. There are just
23 so many, I always get so confused.

24 MR. CAJINA: Are you anticipating an EIR for this
25 project or --

26

1 MR. TAKARA: No.

2 MR. CAJINA: -- negative dec --

3 MR. TAKARA: No. Open --

4 MR. CAJINA: Then it may be at your discretion.

5 MR. TAKARA: I know when we go on to a conditional
6 use permit, which we would have to go through
7 hearings -- a hearing -- go through the zoning officer,
8 if I have to guess, I think it's just a public comment
9 we will go through with the CEQA review. But in the
10 last couple of weeks, we've been talking about so many
11 public hearings and public comments, I lost track.

12 MR. SORSHER: You know, one thing we might want to
13 watch is to maybe coordinate these things with your
14 agency and ours and everything that -- so we don't beat
15 the public to death with hearings and meetings.

16 MR. TAKARA: Right.

17 MR. SORSHER: We don't want to underdo it; we don't
18 want to overdo it either.

19 MR. TAKARA: Yeah. That's definite. But if I
20 recall back, the question was asked once, can we
21 consolidate the DHS required public hearing with another
22 hearing? And I thought DHS had said you wanted your own
23 separate hearing; you didn't want to consolidate with
24 any other agenda.

25 MR. SORSHER: Well, I think I'd have to talk to Jeff

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1 about that. It would depend. I mean, I think -- I
2 think public meetings that -- a meeting like you
3 scheduled for late January is good because that's more
4 informal, you know. It's -- you talk to people back and
5 forth.

6 MS. FELLOWS: It's a proposed plan meeting that will
7 be with a court reporter and a hearing.

8 MR. TAKARA: Oh, it's going to be like a hearing?

9 MR. SLATEN: Well, it will have to have that aspect
10 to it. It will also have informational part of it, I'm
11 sure, as we're doing tomorrow night.

12 MR. CAJINA: You know, a couple of things to be
13 aware of, though, is that, for one thing, there's a good
14 chance that the CEQA process might be signed and sealed
15 by the time we get close to where we need to be to our
16 public hearing side. I wouldn't necessarily hold CEQA
17 up for that.

18 And in your CEQA hearing, if you even have one,
19 you know, generally CEQA focuses on kind of a very
20 narrow range of concerns and focuses on the physical
21 environment more than anything else, whereas what we're
22 focusing on in our evaluation is the ability to treat
23 for what's out there and potential effects on public
24 health, which, you know, I guess the thing to be aware
25 of is if we were to try to combine these hearings, we

28

1 would have to open it up a lot beyond what is
2 traditionally encompassed in CEQA.

3 MR. RIPPERDA: Seems like the only two that really
4 can be merged in the subject matter would be the CERCLA
5 proposed plan public meeting and the DHS permit hearing.
6 They're so far apart in time, unless you guys are ready
7 to go in February.

8 MS. SANTOS: One thing that might be useful is
9 where, ideally, we had a series of informational
10 meetings ahead of time, which really puts the entire
11 picture together for the public, which is NASA's
12 proposed plan, if that's only going to be talking about
13 this narrow piece, which piece is handled by DHS, which
14 piece is handled by CEQA. Because, otherwise, I think
15 people are going to get frustrated because at every
16 meeting they're going to be told, "Yes, those are good
17 concerns, but we don't deal with that."

18 So if there could be kind of like an
19 information session where you had DHS here to talk about
20 what goes on, what aspects do we deal with, what is our
21 evaluation criteria, the CEQA issues, what are the, you
22 know, things -- and then NASA has its formal proposed
23 plan -- they should be talking about some of those
24 issues, and then the formal, you know, checkmark
25 proposed plan meeting.

29

1 MR. RIPPERDA: We can certainly talk about this, but
2 I think that proposed plan meeting would be the good
3 spot to do that. I don't want to have too many -- like,
4 I think, one of you said, you don't want to beat the
5 public up with too many meetings in the course of a
6 year. And the proposed plan meeting is not that much
7 CERCLA stuff to go through, that, you know, we can't
8 also just explain the whole process relating to actually
9 turning the treatment system on.

10 MS. SANTOS: Yeah. I think it's important they
11 understand the CEQA and the DHS issues as well.

12 MR. FIELDS: And I would suspect that -- we talked a
13 little bit about this when we were with the City, but
14 every meeting would be a joint effort between NASA, the
15 City, and other stakeholders. I mean, nobody's going to
16 run with a meeting on their own.

17 (Mr. Tony Zampiello enters the room.)

18 MS. FELLOWS: So I guess that about wraps everything
19 up.

20 MR. HAYWARD: Right. That's good for me.

21 MR. TAKARA: Anyway, this -- we have two charts to
22 share with everybody.

23 The first one shows the preferred (inaudible)
24 for the Sunset reservoir wells. All the -- all five --
25 well, actually covers four wells with the exception of

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1 Copelin Well. That well we're still doing repair work
2 to. But it hasn't changed much for the three --
3 actually, I said four.

4 What happened to the fifth one there? One,
5 two, three, four -- something's -- one of the wells is
6 missing up there.

7 Is L-5 up there?

8 MS. KARAKANOVA: Gary, Villa Well, we're not testing
9 it because we have mechanical problems.

10 MR. TAKARA: Oh, all right. Okay. Sorry.

11 Villa and Copelin, we have mechanical
12 problems. So for the three wells, it hasn't changed
13 much over the last five, six, seven months. Remained
14 fairly constant.

15 Garfield Well is the only well that we're
16 actually putting into our system. All the other wells
17 are just sampled and then shut off every week or so.

18 And the next one is the Eastside Wells. Let's
19 see. I believe all the wells are shown up there --
20 yeah. I think all the wells are being sampled right
21 now. Some of them are overlapped. That's why you can't
22 really see what wells are shown up there, but most of
23 them are either non-detect or below five.

24 And the only well that we're running right
25 now -- actually, all the wells are running through our

31

1 system with the exception, I think, of Chapman.
2 Chapman, we ran into some metering problems. So that
3 well is temporarily shut off. But the rest of them are
4 running through our system.

5 Any questions?

6 MS. FELLOWS: They're running through your system.
7 They're operating, actually --

8 MR. TAKARA: Right.

9 MS. FELLOWS: -- providing water?

10 MR. TAKARA: Yes. With the exception of Chapman,
11 and that's more of a meter problem we had.

12 MR. HAYWARD: And you're not having any problems
13 managing the production of your adjudicated -- your
14 allocation? You get all your water out of the ground
15 with the wells you have up and running right now, no
16 problem?

17 MR. TAKARA: Yes. In the last few years, we've been
18 able to do that because the recapture spreading program
19 has been relatively low. There wasn't a lot of rain.

20 Beginning July 1st, '05 this year, we had quite
21 a bit of substantial amount of spreading periods. So
22 with the amount of wells that we're currently running,
23 we're going to probably end up storing water for the
24 first time. In other words, this is the first time we
25 would be running into some capacity problems.

32

1 MR. SORSHER: We're really not seeing the
2 perchlorate moving west to east there, are we?

3 MR. TAKARA: We're crossing our fingers.

4 MR. SORSHER: So far so good.

5 MR. TAKARA: So far so good.

6 MR. RIPPERDA: How far east are these wells?
7 They're pretty far east; right?

8 MR. TAKARA: Yeah. Well, actually, the Craig,
9 Monte Vista, and Woodbury are located roughly in the
10 center of Pasadena area, and then the other three wells
11 are located on the far east of town, 58, 59, and
12 Chapman.

13 So to kind of give you an idea, the closest
14 well -- among these five wells, the closest well from
15 this location is probably Craig Well, which is a good
16 maybe two and a half, three miles in a straight-line
17 shot.

18 MR. RIPPERDA: So much farther away than Rubio and
19 Las Flores?

20 MR. TAKARA: Yeah. Oh, yeah.

21 MR. SLATEN: So moving back on-site, OU-1 treatment
22 system, the -- I think we'll have a graph here in a
23 minute that shows a lot -- the levels of the influent
24 from the extraction wells.

25 The shallow well has come down more than the

33

1 deeper well. And so -- and the levels have come quite a
2 ways down. You'll see on a chart here in a minute.

3 We did have one submersible pump, the shallow
4 submersible pump extraction well. One quit working so
5 it had to be replaced. It actually had some scaling and
6 corrosion on it, which is kind of curious. And they're
7 looking at the pump to see why it failed. It was still
8 under warranty and wouldn't have expected it to fail
9 yet.

10 So we had to turn up the capacity of the deeper
11 well, but it did fine at 120 gallons per minute. That's
12 all fixed and back to flow rates balanced between the
13 deep and the shallow extraction well. Submitted --

14 MR. SORSHER: What is the difference in the depth of
15 those two wells?

16 MR. FIELDS: Their screen intervals overlap over a
17 hundred-foot interval. But the ones -- what we had seen
18 during some earlier studies was some stratification of
19 perchlorate concentrations even within that hundred-foot
20 zone. And so we had -- we put in two wells to give us
21 some flexibility on maximizing mass removal.

22 What we've observed is that they're roughly the
23 same. We're not seeing a significant amount of
24 stratification in the extracted concentrations, at least
25 up to this point.

34

1 So -- but they're just within that source area,
2 which is about a hundred-foot thick aquifer zone.

3 MR. SLATEN: What -- kind of leading to on this page
4 is because we had -- there can be problems with wells,
5 and especially the injection wells, and we've seen some
6 pressures coming up a little bit in our injection wells.
7 And injection wells are known to be fickle and
8 inevitably do stop up. And we're planning next year on
9 probably having to clean out our injection wells.

10 But what I'd like to start thinking about is
11 for options to keep the plant going. If one or both of
12 our injection wells were to plug up, our plant would
13 have to be shut down and the bugs in jeopardy on life
14 support while we got a rig out and we rehabilitated
15 injection wells, which can take a little bit of time.

16 I'd like to start opening up for discussion
17 about treated dis- -- water being able to be discharged
18 during these times when the injection wells might not be
19 working, be able to discharge it to surface water. It's
20 clean -- clean water, you know, clean enough to drink.
21 And I'm wondering what it would take to start working
22 towards the possibility of discharging surface water.

23 What we'd be talking about, you know, if we
24 could turn the volume down so there would be some water
25 that does not get directly injected back into the

1 ground. If we turn the volume -- we can adjust the
2 volume down to a hundred gallons per minute and still
3 have the bugs being able to get the nutrients they need
4 and not endangering our colony. And then the water
5 would flow back down into the Arroyo where it all soaks
6 into the ground anyway.

7 So just kind of opening that up for discussion.
8 I'm not sure what approvals, permits, you know, what
9 process we'd go through. I haven't thought it through a
10 lot yet. But I thought I'd just kind of throw it out
11 for the right people to chew on a little bit.

12 MR. RIPPERDA: The first question would be the water
13 rights because the discharge is more Regional Board. So
14 we'll table that for now. So just water rights, what
15 does NASA need to do for that?

16 MR. ZAMPIELLO: Well, we sent a letter almost a year
17 and a half ago with questions on the water rights.
18 Never got an answer.

19 Technically, they can't pump unless they lease
20 rights to somebody else, even if they discharge. Unless
21 we were to determine that it never left the base, then I
22 guess you could go that route. But I didn't think this
23 plant was -- it's treating down to non-detect for
24 perchlorate?

25 MR. RIPPERDA: Yeah.

1 MR. SLATEN: Oh, yeah. It's better than what you're
2 getting out of the tap.

3 MR. ZAMPIELLO: Well, I guess what we need to do is
4 -- you know, since today is the first that I've heard
5 about this --

6 MR. SLATEN: Yeah. And this is not something I'm
7 ramming down anybody's throat. I mean, it's an idea --

8 MR. ZAMPIELLO: No. Just lay it out and we --

9 MR. SLATEN: -- in the future.

10 As far as the water rights, I think the way
11 I've tried to answer -- I did not directly answer all
12 the questions -- the points in your letter back then
13 because my attorneys were ready to fight about that. I
14 just didn't want to get into a pissing match between
15 attorneys because I didn't think anybody would really
16 win on that. So --

17 MR. ZAMPIELLO: I mean, I'm just stating a fact. We
18 never got our letter answered.

19 MR. SLATEN: I understand. I tried to kind of
20 answer you verbally that we're not wasting a lot of
21 water here. As a matter of fact, we put more water back
22 in than we've taken out so far with this system because
23 of the wash water we use on the pad and the rainwater
24 that catches on the pad.

25 If it does come to this, we would be taking a

37

1 little more water out of the ground than we put back in.
2 It would be soaking back in right within a few hundred
3 feet. So it would be going back into the base. And the
4 amounts we're talking about at a few hundred gallons per
5 minute for a relatively -- you know, a hundred gallons
6 per minute for a few days or weeks would be, you know,
7 less than an acre, a few acre feet, perhaps. So fairly
8 small amount. Sode miminis, if there is such a
9 consideration, and all in all for the betterment of the
10 basin. So there's a lot of good reasons to want to try
11 to find a way to make this work.

12 MR. ZAMPIELLO: No. I understand. But, I mean, the
13 way the judgment is set up is that anybody that's not a
14 party to this judgment technically is not supposed to be
15 pumping. So there's that issue. Then there are the
16 rights, and there are other things.

17 I'm not saying that anybody even would have a
18 problem with what you folks are doing. It's just there
19 are things on our side that we have to make sure we stay
20 in compliance with the judgment.

21 So, I mean, I'm sure the argument could be made
22 that it's returned to the basin, and that may be a valid
23 argument. But it may be that you folks would have to
24 become a non- -- what we call a non-producer party to
25 the judgment to do that. I don't think it's anything --

38

1 as long as it weren't protested by any of the other
2 parties, then it would just be a matter of finding --

3 MR. SLATEN: Okay.

4 MR. RIPPERDA: Can NASA just buy that many acre feet
5 from Pasadena or one of the other producers?

6 MR. ZAMPIELLO: Well, I think that's the simplest
7 way that we thought we could do it. You know, like I
8 say, again, there's the -- I'd have to take it to the
9 Board as to whether they had a concern with doing that.

10 I haven't received any negative input from
11 anybody up to this point to do that. In fact, I think
12 that's what our original letter said is that, you know,
13 just work something out with the water rights holders
14 within the basin.

15 We haven't been up on the site to see how
16 accurately it's all being measured and all of that
17 stuff.

18 If you folks, in fact, were able to give us a
19 positive balance, I'd like to buy the machine that
20 creates more water than you ever pump because I'd
21 probably sell it like crazy.

22 MR. SLATEN: It's rainwater and a water hose that
23 has done that for us.

24 MR. ZAMPIELLO: But, you know, I mean, I think it's
25 just something we need to sit down and figure out the

39

1 logistics of more than anything else. And our first
2 step was to send that letter. We don't want to get into
3 any kind of legal wrangling either. Maybe it's a matter
4 of just sitting down with our attorney and figuring out
5 how we just fit you guys into what we do under the
6 judgment.

7 And I think it's -- from all the results, it's
8 a positive project, and we want to keep it going so...

9 MR. HAYWARD: I'd like to comment when you're done.

10 MR. ZAMPIELLO: I think --

11 MR. HAYWARD: As a member of the Raymond Basin
12 Management Board, just to help clarify the board's
13 position, what we really don't want to do is allow -- is
14 to allow this to be -- appear that we're setting
15 precedents in allowing NASA to just proceed as they so
16 desire as far as producing water in the basin, because
17 while we have had to address this in the past where
18 nonparties to the judgment decide that they're going to
19 buy 15 acres of land and they're going to drill them a
20 well and they are going to need water to support their
21 15 acres, and we've intervened with that process.

22 I think we just -- you know, the Board or the
23 basin's position is that we want to make sure, number
24 one, we don't set precedents in not addressing it and
25 addressing it properly, but also the members of the

40

1 basin understand exactly what's going on at the lab site
2 and the positive work that's being done at the lab site
3 is just that -- you know, we just need to document
4 some -- document what's going on so we can retain our
5 credibility with the rest of the basin.

6 MR. RIPPERDA: So shouldn't NASA be sending a letter
7 now -- I don't know whether it's in response to your
8 letter, or they send a new letter, outlining what they
9 might do if they have to rework the wells, their
10 estimated time --

11 MR. ZAMPIELLO: Yeah. Or just saying let's sit
12 down, and we realize that these are certain issues under
13 the judgment. Let's figure out a way to get --

14 MR. RIPPERDA: So they should send a letter to you
15 outlining what they think --

16 MR. ZAMPIELLO: Yeah. I mean, we have -- even
17 within the judgment, we have requirements for measuring
18 and everything else. And I think the Board could make a
19 determination, if we had enough facts of how you were
20 going to do this, if you were going to discharge and
21 recover it here, aside from the regulatory issues, that
22 we could say, okay, then there is no loss to the basin.
23 It's a net zero loss. You know, maybe make you folks
24 nonparty producers and move on with it. Just, you know,
25 get meter reads.

41

1 I don't think it's the end of the world. But I
2 know we're not familiar enough with the process either
3 in the sense to say what -- I don't know what happened
4 with the rest of the chemistry in the water. You know,
5 I know with other processes, you change the chemistry in
6 the water.

7 And it's kind of just like a discovery process.
8 What do you propose? What are you doing? What is it --
9 we really -- we really haven't made an issue of it
10 because we knew this was kind of a pilot study to see
11 how things are going, and you guys needed to move ahead.

12 MR. SLATEN: Yeah. And it has been. And part of
13 what we've been talking about earlier is we're turning
14 this in -- with our public meeting tomorrow night, we're
15 proposing turning this in to part of the solution, the
16 final solution, so it's becoming more mature.

17 MR. SORSHER: If you start this discharge, like you
18 were saying, is there any possible -- depending on where
19 you put it, I'm not sure if there would be any effective
20 soil flushing, might it wash out any other contaminants
21 that are in the vadose zone?

22 MR. SLATEN: Probably not, because we're not going
23 to spread it around right there. It's going to flow
24 down the storm drain towards the Arroyo and daylight.
25 There's some --

42

1 MR. SORSHER: Swales.

2 MR. SLATEN: -- swales that catch it on the side of
3 the Arroyo, and that's where all the rainwater runoff
4 soaks in already.

5 MR. RIPPERDA: So for water balance, there'd be some
6 kind of percent that percolates in and some percent
7 that (inaudible) rate that's, you know, different than
8 the current injection where a hundred percent gets
9 injected. So right now there is --

10 MR. SORSHER: It's not really being spread onto the
11 land like --

12 MR. RIPPERDA: No.

13 So they're not seeing the vadose zone. So
14 apart from the water rights issue, their current
15 operation is doing nothing to clean the vadose zone.
16 And there's almost nothing we can do about that because
17 there's no way to create a leach field or settling basin
18 right in the heart of JPL. That's just not going to
19 happen.

20 But apart from the almost de minimis water
21 rights issue from reworking a well would be maybe at
22 some point in the next year or two or three, it would be
23 better for the aquifer cleanup to not use the injection
24 wells for a while, while still pumping, to create a
25 bigger cone of depression, a bigger drawdown zone, so

43

1 that same amount of water -- or, actually, a full
2 pumping rate volume of water would be going to the storm
3 drain over a longer period of time, and then that's not
4 quite -- that's not even close to de minimis anymore. So
5 that's a separate water rights issue. Well, it's not as
6 immediate because, you know, the well rework may happen
7 in the next year, trying to play with the cone of
8 depression.

9 MR. SORSHER: I think that's a good idea that you
10 have, Steve.

11 MR. FIELDS: That's where it came up. We were -- we
12 saw the pressures in our injection wells going up, at
13 the same time looking at the possibility of having to
14 redo them at the same time and then what we're going to
15 do with that. And we're just thinking we should have
16 something in place to give us some flexibility so that
17 we don't --

18 MR. SLATEN: I'm not going to take any action
19 without full consensus of everybody.

20 MR. ZAMPIELLO: Yeah. I don't -- I don't think it's
21 even a matter of that. It's just a matter of how we
22 stay within the judgment --

23 MR. FIELDS: Okay.

24 MR. ZAMPIELLO: -- and don't open ourselves up to
25 any parties --

1 MR. SLATEN: And then the Regional Board, I
2 guess --

3 MR. RIPPERDA: Just one more question. So if they
4 do pursue buying water rights from somebody, and
5 Pasadena is the biggest owner of water rights, is that
6 just something they work out an agreement between the
7 two parties? It doesn't really need the Board approval,
8 they're just buying water, but instead of getting it
9 from the tap, they're getting it from their own well?

10 MR. ZAMPIELLO: Yeah. You can't -- the way the
11 basin is set up right now, there's no replenishment. So
12 whatever has got to be pumped and doesn't return has to
13 be accounted for --

14 MR. RIPPERDA: But they can just buy those rights
15 from Pasadena and then pump it out of their well --

16 MR. ZAMPIELLO: Yeah.

17 MR. RIPPERDA: -- that doesn't need anything more
18 than that?

19 MR. SORSHER: You still may need something from the
20 Regional Board for the quality of the discharge.

21 MR. RIPPERDA: Right. I know that. I just wanted
22 to finish the water rights --

23 MR. ZAMPIELLO: From our side.

24 MR. RIPPERDA: Okay. That's good to know.

25 MR. HAYWARD: Mark, Pasadena, Las Flores, Rubio,

45

1 Valley, any --

2 MR. ZAMPIELLO: Yeah. Anything -- yeah.

3 MR. TAKARA: How much water -- I'm just curious.
4 How much water are you talking about on an annual basis
5 when you're talking about buying and --

6 MR. RIPPERDA: Well, several hundred gallons a
7 minute times, you know, I don't know, a few weeks to
8 rework a well?

9 MR. TAKARA: Oh, you're talking only over a few
10 weeks?

11 MR. RIPPERDA: Or -- or if we're at some point in
12 the future talking about playing with the aquifer
13 dynamics, the drawdown, you know, there might be several
14 hundred gallons a minute for, you know, several months,
15 six months. That's something we haven't talked about,
16 haven't modeled yet. But, you know, something that we
17 have to kind of think about.

18 MR. FIELDS: So the most we could -- we could pump
19 is 400-hundred acre feet a year, I think.

20 MR. TAKARA: So you're talking about up to 400-acre
21 feet a year?

22 MR. FIELDS: I don't think we're talking about that.
23 I'm just saying --

24 MR. SLATEN: I think we need to reach an
25 understanding about if there's going -- what kind of

46

1 credit, is there going to be a transportation debit
2 out of this? Because, otherwise, it all soaks right
3 back into Monk Hill just a few hundred feet down the
4 hill.

5 MR. ZAMPIELLO: Yeah. And it may be a matter of
6 just looking at it and saying it's negligible.

7 The key thing from our point -- our standpoint
8 is that it's measured and that, you know, we straighten
9 out the judgment, and you guys being nonparty, I don't
10 think -- if you talk about 10 percent of that 400-acre
11 feet, I don't think anybody -- the Board can make the
12 determination that it's a greater benefit to the basin
13 than to hassle over that small amount.

14 MR. TAKARA: Well, I just want to add, being
15 involved in the spreading operation of Arroyo Well, I
16 know that if it's -- if you're looking at a debit/credit
17 system, keep -- bear in mind, from what I recall, if the
18 water is released into the Devils Gate Reservoir, and
19 you're planning on getting -- you know, you have a debit
20 for what you pump, and you plan on getting a credit for
21 the water that you put back into the reservoir area, if
22 the County releases that water at the dam, that --
23 typically, it's debited against any agency that puts
24 that water behind the dam, even though that water is
25 what we call natural flows, it's always debited

47

1 against -- first against the party. And then anything
2 beyond that amount, then it (inaudible) to the natural
3 flows.

4 So just kind of keep that in mind. It gets a
5 bit complicated. I mean, you would think that if I put
6 the water back in Devils Gate Reservoir, well, I should
7 be credited for "X" amount. You know, it's a big area.
8 Most of it will go -- will percolate back in the ground.

9 But once County opens the spigot, immediately
10 all that is deducted against all the parties.

11 MR. ZAMPIELLO: -- discharge and all that.

12 I think --

13 MR. RIPPERDA: It's complicated.

14 MR. TAKARA: Yeah.

15 MR. RIPPERDA: And then the discharge issue with the
16 Regional Board -- Mohammad is having nasal surgery, so
17 he can't be here today. But I think that that's a
18 letter that you send to him with an outline of the water
19 quality parameters, the water chemistry, quantity,
20 and -- you know, Steve and I talked about this. I'm
21 just kind of saying it for the minutes. And we went
22 through this a few years ago with one of the on-site
23 treatability studies, and the Board sees that it
24 complies with the Basin plan or not.

25 Since it's the same exact aquifer water that's

48

1 then been treated, it would make sense that you can
2 discharge it to the Arroyo, (inaudible) aquifer, but
3 sometimes basin plans can be more strict than the
4 aquifer water itself. Something to work with the
5 Regional Board on.

6 MR. SLATEN: Okay. So OU-1 treatment plant, about
7 140-acre feet of water have been treated since early
8 this year; taken out about 360 pounds of perchlorate and
9 about 10 pounds of carbon-tet and a couple of TCE.

10 So we consider it has been quite effective in
11 removing perchlorate and VOCs.

12 And I think we got some graphs that I'd like to
13 look at.

14 The point of this graph, the plant influent
15 combined from the two wells has had a fairly steady
16 decrease and may have sort of leveled off, which is
17 interesting.

18 The other on the bottom is FBR effluent that
19 does show at a couple of points we have had perchlorate
20 in the effluent when we've had a little trouble feeding
21 the bugs just right. And it does show that it's a
22 careful balance of feeding the bugs right versus trying
23 to balance the system so we don't produce any
24 hydrogen sulfide smell.

25 And that's kind of where -- in the recent,

49

1 we've kind of found the point where you need to back off
2 a little bit on the -- on trying to run it right up to
3 the edge where you have no potential for smell -- any
4 hydrogen sulfide generation. So we have put on a little
5 air -- a little carbon filter to catch any hydrogen sulfide
6 generation off of the aerator.

7 Anything to add to that?

8 MR. RIPPERDA: Makes me happy that you went with ion
9 exchange for drinking water system instead of
10 biological --

11 MR. HAYWARD: You just contradicted what he's been
12 telling the public. I mean, he's been running around
13 here praising his biotechnology --

14 MR. RIPPERDA: But bio is fabulous --

15 MR. SLATEN: It works well for what we're using it
16 for.

17 MR. RIPPERDA: -- for reinjection. But when you see
18 little blips like that, I'm glad you're not tied into a
19 public water system.

20 MR. SORSHER: You would be getting some -- your
21 phone would be ringing off the hook.

22 MR. SLATEN: We've -- Nick's put together a paper
23 that's coming up at some conference about just how much
24 work there is in keeping the biological system happy and
25 dealing with filtering the water afterwards, and all.

50

1 So it's a lot, lot more labor intensive than
2 Lincoln Avenue's nice, simple pass-through ion exchange.

3 MR. HAYWARD: Steve, you know, there's a cost to pay
4 when you insist on being on the leading edge of
5 technology. You know, you want to maintain that status.
6 There's a cost -- a price to pay for that.

7 MR. SLATEN: Yeah.

8 What's the next slide?

9 This is just a cumulative perchlorate mass
10 removal. Interesting to watch this, just, you know, at
11 some point if we reach an asymptotic condition on the
12 removal. And it has -- the removal has slowed down a
13 little bit.

14 A little bit nosier here, but it's watching the
15 monitoring wells around and what's happened over time at
16 the monitoring wells.

17 You see, we have a line where the plant begins
18 operation, and we've seen decreases in all the
19 monitoring wells around the plant, except for Monitoring
20 Well 16, which is off to the west where we're planning
21 on building the expansion, which area would be -- which
22 would be covered by the expansion that we're proposing.

23 Is the map the next one? Yeah.

24 See Monitoring Well 16 over there? That's the
25 only one that's gone up since we turned the plant on.

51

1 And we don't know exactly what the flow is like as we
2 turn the plant on, but we have caused some movement of
3 water in one direction or another, which has moved
4 higher levels of water into the retrieval area of the
5 Monitoring Well 16.

6 So it's a good idea for us to get out into the
7 expansion area and put in a couple of more wells.

8 I think the next slide --

9 MR. FIELDS: We get into well spacing.

10 MR. SLATEN: We get into well spacing.

11 Mohammad had made a comment -- and a comment
12 about well spacing and something about our 300-foot area
13 of influence, which, I believe, we had at least that,
14 but then he said that our wells may not be spaced close
15 enough together.

16 And just the point of this is if we take for
17 granted that his 300-foot area of influence is correct,
18 we have a really good overlap at the proposal that we
19 have for spacing right now. And I think it would be a
20 good job of getting the chemicals all the way out past
21 MW-16, plus overlapping well with the existing
22 extraction well. We've done it a little more
23 scientifically --

24 MR. SORSHER: Is this the existing extraction well?

25 MR. SLATEN: On the right --

52

1 MR. RIPPERDA: That's the only one.

2 MR. SORSHER: That's right. You just have one
3 extraction well now.

4 MR. RIPPERDA: Well, there are two, but at different
5 depths. They're essentially the same geographical
6 spot --

7 MR. SORSHER: Oh, okay.

8 MR. RIPPERDA: -- just different depths.

9 MR. SLATEN: Next slide, I think is where we've done
10 forward and reverse particle tracking, which is a little
11 more of a sophisticated model than what we showed with
12 just the 300-foot area of radius because it's not a --
13 it's not a 300-foot circle of radius around. You have
14 to consider what's coming and going, you know, what the
15 path of the groundwater is.

16 And this shows, I believe, that with the -- our
17 proposals for injection and extraction locations, we
18 will have a good capture area that probably includes all
19 of what we call the source area where the higher levels
20 of chemicals are.

21 Anything to add?

22 MR. FIELDS: This was just Mohammad's recommendation
23 was to put in three -- or put in an additional well
24 between the ones we proposed. And so we wanted to run
25 that scenario as well and see if there was an

53

1 improvement in our capture zone.

2 MR. SLATEN: So if you keep that in your mind and
3 flip back one, it does not improve -- it doesn't capture
4 any more by putting in an extra well than -- flip back
5 again, Keith. It's kind of like you got to keep them
6 both in your mind.

7 But I believe we do an adequate job of capture
8 with the wells -- with the one extra well we proposed
9 for extraction.

10 MR. RIPPERDA: What is forward tracking and backward
11 tracking?

12 MR. SLATEN: It's -- you pretend you follow the path
13 of a particle --

14 MS. FELLOWS: Which one is forward and which one is
15 backward?

16 MR. FIELDS: This one -- when we say "forward
17 tracking," we released particles in the model all around
18 each of these injection wells and watched where they
19 went.

20 With backward tracking, we model the path in
21 reverse. And so we released particles around each of
22 the extraction wells --

23 MR. RIPPERDA: Everything that's coming into that
24 extraction well, where did it come from?

25 MR. FIELDS: Right. So it's just different ways --

54

1 you know, we want to see, well, are we capturing what
2 we're injecting, and are we extracting what we're
3 injecting?

4 MR. SLATEN: What we want to -- it's kind of just a
5 check; two different ways to run the model.

6 MR. RIPPERDA: So backward tracking is kind of the
7 radius of influence, or it's the capture zone?

8 MR. SLATEN: Right. It's the radius of influence
9 and the flow path.

10 MR. FIELDS: Typically, we combine those to try to
11 get our capture zone. You know, because one will be a
12 little bit different on each end, and then we combine to
13 try to get the best capture zone representation.

14 The other point is if a particle or two gets
15 past our source treatment, our main objective is mass
16 removal, not containment. Perchlorate is already
17 outside of our source area.

18 MR. SLATEN: We're concentrating on mass removal.
19 We think we can do it well. We'll be adding more
20 discussions, I'm sure, with Mohammad about our technical
21 basis for what we're proposing.

22 MR. FIELDS: And we'll document this as part of a
23 work plan.

24 MR. SLATEN: Yeah. And at half a million dollars
25 per well, I don't want to put in wells unnecessarily.

55

1 MR. RIPPERDA: So as you move towards your work
2 plan, we should be doing some sensitivity studies with
3 this, tweaking the trans (inaudible) up and down and the
4 other parameters to show that this isn't just the best
5 case scenario for your capture zone.

6 MR. SORSHER: Will that also be a two new well --
7 will that be a few screens or --

8 MR. SLATEN: No. One longer screen. Just from
9 watching the performance of the other two screens, we
10 don't think it's necessary to have two separate screens.

11 MR. RIPPERDA: Are you going to be testing the well
12 as you drill it, just to make sure that you don't have a
13 more highly stratified area 300 feet to the west than
14 you do at your current one?

15 MR. SLATEN: David Clexton is the guy that's going
16 to watch that stuff in the field and will do the well
17 logging and decide where to screen -- the answer is yes.

18 MR. FIELDS: We'll be looking at -- go ahead.

19 MR. CLEXTON: I think we'll follow the same process
20 we did last time. We didn't do any -- I don't recall,
21 but I don't think we did depth to street groundwater
22 sampling.

23 MR. FIELDS: Can we even do it with the mud
24 ruddering?

25 MR. CLEXTON: Not -- we probably could. The

56

1 lithology, we can -- we have a lot of data from the
2 other area, because MW -- or the test that Arcadis had
3 done used a sonic rig. But we'll have to look at, you
4 know, the drilling method and consider whether or not we
5 want to stay with mud rudder, or possibly change over to
6 something where we can actually get some soil samples.

7 MR. FIELDS: We are talking about ground -- you want
8 to see if there was stratification of the groundwater
9 concentration of that hundred feet.

10 MR. RIPPERDA: I wouldn't say I want, but I was just
11 wondering if there's a benefit to, rather than screening
12 a full hundred feet, by plan, to look at the
13 concentrations and see if there is an advantage to still
14 doing like two different screens or a smaller screen or
15 a bigger screen.

16 MR. FIELDS: I guess -- I mean, we can devise --
17 where we got to this point, we looked at the data we had
18 from our pilot test and said, okay, we have two wells,
19 two -- you know, that's almost twice as expensive. We
20 have two pumps. It doesn't look like we're seeing the
21 results we thought we might see. We're only talking
22 about a hundred-foot screened interval. Let's just take
23 that data and move to just a single well with a single
24 pump in the next location.

25 Now, if we -- I felt, you know, we kind of --

57

1 the data we had now is the inputs we need for our
2 decision, and if you think that we need additional
3 inputs, we can go through those.

4 MR. RIPPERDA: I haven't thought about it.

5 MR. FIELDS: Okay.

6 MR. RIPPERDA: That's why it was a question, not a
7 statement.

8 Is MW-16 a multi-port well?

9 MR. FIELDS: No. It's a shallow thin pipe well.

10 The only multi-port well we have in this area
11 is MW-24, which is in the middle here. Thirteen is
12 shallow. Eight, I believe, is a shallow well. I would
13 have to check. I think it is.

14 MR. SORSHER: Where is 16 on those maps?

15 MR. FIELDS: Can you see my pointer? Sixteen is
16 here. Seven, twenty-four, thirteen, eight.

17 MR. SORSHER: Is there any theory why 16 shot up so
18 high on perchlorate like that? I'm kind of thinking
19 there may be a hot spot nearby it that's being swept
20 through.

21 MR. SLATEN: We have moved something around a little
22 bit. Exactly what -- you know, on that kind of level,
23 all it would take is a few feet, you know, for a higher
24 concentration water to move around and --

25 MR. RIPPERDA: If you look at this, you know, this

58

1 is the -- that's the new system. And so that's -- go
2 back to the two wells. Yeah. Yeah.

3 So that's the new system. So right now you're
4 injecting at both of these; right?

5 MR. FIELDS: Uh-huh.

6 MR. RIPPERDA: And so it's like, well, some
7 injection here could be not like captured there, and so
8 you're raising the water level a little bit to the west,
9 you know, flushing a little bit out of the vadose zone,
10 or pushing a little water that way from a high source
11 area.

12 MR. FIELDS: I think that there's two things: One
13 is we've changed the water flow pass up there to a
14 certain degree. So it's not that we're pushing things
15 around, but the water that we're represented by 16 is
16 different than it used to be.

17 The other thing is we're at -- we've never seen
18 water levels as high as they've been over the past six
19 months since we've been monitoring out here at 16. So
20 we don't know what effect that has on it as well. But
21 just a higher water level may be releasing some trapped
22 residual in the water vadose zone. So it's hard to say.

23 MR. TAKARA: Is the static water level raised quite
24 a bit?

25 MR. FIELDS: Yeah. The highest we've seen since

59

1 we've monitored since 1996.

2 MR. TAKARA: What level -- what difference in level
3 are you talking about?

4 MR. FIELDS: Do you have that paper, David?

5 MR. CLEXTON: I think I have it.

6 Don't know if I have it summarized here. Yeah.
7 I just have the current water levels.

8 MR. TAKARA: That's all right.

9 MR. FIELDS: I think we either had -- we had it in
10 the progress report for the OU-1 operation, and then we
11 had that in there. I can look in there for you. But
12 I'd be guessing if I said --

13 MR. SLATEN: Wasn't that one -- I asked --

14 MS. LORI GARNER: That one is --

15 MR. SLATEN: -- that one was up on the web last
16 week.

17 MS. LORI GARNER: Uh-huh.

18 MR. SLATEN: Keith's really proud of this because he
19 worked on it. We didn't use it for our -- our little
20 earlier version. Keith got it ready because I asked him
21 for something for tomorrow night's public meeting. And
22 then I told him it had too many colors in it, gave me a
23 headache.

24 MS. SANTOS: I liked it.

25 MR. SLATEN: So it's not going up tomorrow night,

60

1 although we might learn to love it as much as Keith
2 does. Tries to show in a little bit of 3D, you know,
3 what's going on for the layperson to understand.

4 For tomorrow night's meeting, we still have an
5 old, simple just flat cross-section that looks at it
6 directly from the side, which is a little simpler, but
7 certainly has a lot less information.

8 MR. TAKARA: The existing system is the two
9 injection wells on the right plus the extraction well up
10 there?

11 MR. FIELDS: Correct. This whole -- this whole
12 setup here.

13 MR. TAKARA: That's the existing. The proposal is
14 everything to the west of that.

15 MR. SLATEN: And we could have put a whole lot more
16 buildings up there because there are buildings all
17 around, up and down and around all of our wells. We're
18 basically having to kind of fit into alleys and streets
19 around to find space for our piping and wells.

20 MR. SORSHER: The only thing that might mislead the
21 public on this would be showing another one of those
22 underground lakes that I've heard about.

23 MR. SLATEN: That's part of the problem. How do you
24 show that that's inside the interstitial spaces in the
25 rocks?

61

1 MS. SANTOS: People don't necessarily understand
2 when you say injection and extraction wells, and you
3 know they're shown down, but that was the nice part of
4 the visual.

5 MR. SLATEN: Yeah.

6 MS. SANTOS: Just giving it kind of a sense of
7 things moving.

8 UNIDENTIFIED SPEAKER: If they want to think of it
9 as a lake, that will do too.

10 MR. SLATEN: Sometimes it doesn't do any harm.
11 Other times, it gets in the way of explaining how things
12 work.

13 MR. RIPPERDA: Once, 13 years ago, I got a question
14 about aquatic fish: What about the fish that live in
15 that water? So --

16 MS. SANTOS: That one sticks with you.

17 MR. SLATEN: So Keith had to put this up because he
18 was proud of it.

19 MR. FIELDS: He put the effort into it --

20 MS. SANTOS: I like it.

21 MR. TAKARA: I will go on the record saying it looks
22 good, Keith.

23 MR. SLATEN: And the idea was brought up about a
24 tracer study. I don't know who brought it up first,
25 whether it was Mark or Mohammad. I think Mohammad may

62

1 have done it at one of our last meetings. Mark and I
2 had talked about it once in a while. I had talked to
3 Keith about it. You know, I tell Keith, well, the best
4 tracers are the radioactive ones because you can really
5 find them, but people don't like that usually injected
6 into their water.

7 So the idea is, up here in this area, it would
8 be interesting to try to help us determine travel times
9 and travel paths by having some kind of tracer in the
10 water that we could watch for and evaluate what's going
11 on.

12 And Keith's done a little bit of looking into
13 it. And one of the possibilities is potassium bromide,
14 which apparently is fairly easy to see at low levels.
15 If you put a little bit into an injection well, you
16 could watch for its emergence in extraction wells using
17 the real-time field instruments.

18 So we're thinking a little bit more about that.
19 We're going to get background bromide samples in the
20 October, November groundwater monitoring so we can see
21 what background levels are naturally occurring already.

22 So it's just an idea we had that we're looking
23 into a little bit more. Maybe another tool that helps
24 us understand the local hydrogeology and flow.

25 MR. FIELDS: The ones that have been done,

63

1 typically, on a smaller scale than what we're talking
2 about here, sometimes you don't get very good results
3 and just have more questions than you have answers.

4 There was a study we found by USGS on a similar
5 scale to what we're looking at here that evidently had
6 some better results.

7 So we're going to, you know, continue down this
8 path of evaluating, but we would also want to set
9 expectations that it could be difficult to achieve a
10 mass balance, which is really what you want. You want
11 to put a certain mass in and extract a certain mass and
12 say, yeah, we've captured everything. But that may be
13 difficult.

14 MR. SLATEN: It is important for us to understand,
15 really, the local conditions of how much we're getting,
16 where the flow is going, how much of it is just going to
17 go in straight through versus getting the area we need
18 to get, and this could be important -- important extra
19 data to help us understand how good --

20 MR. SORSHER: Do you have enough monitoring wells to
21 fill in the gaps that you're going to have there?

22 MR. SLATEN: Some people think you can never have
23 enough monitoring wells. I mean, you can see that we've
24 got them a few hundred feet apart.

25 MR. SORSHER: Yeah.

1 MR. SLATEN: But, you know, ideally, the place would
2 be Swiss cheese, and you could watch every square foot.
3 But I don't want to spend a lot more money on monitoring
4 wells when I've got real cleanup I can spend money on.

5 MR. RIPPERDA: They've got pretty good monitoring
6 well layout. They've got one about halfway between the
7 injection and the extraction to track travel times.
8 They've got one about halfway between the current
9 extraction, or proposed extraction, which you can use a
10 little bit of lateral -- I mean, they've got some
11 stepped out to the side slightly downgradient to see if
12 anything is getting past the extraction. It's probably
13 as good as you would want for a low number of wells.

14 MR. SLATEN: We'll look into this a little more and
15 see if we think it has merit before we propose anything.

16 MR. TAKARA: Keith, what does "IRZ" stand for?

17 MR. FIELDS: Oh, I'm sorry. That's the -- Arcadis,
18 you may recall, did the in situ reactive zone study a
19 couple of years ago. They -- it was around MW-7. They
20 used potassium bromide as their tracer, and they
21 injected a certain amount and never saw anything in
22 their wells, but it's --

23 MR. SLATEN: So we're wondering where it is now.

24 MR. FIELDS: Yeah. That's part of our reason to
25 collect background, but it's probably such a low mass --

65

1 MR. RIPPERDA: They were dealing with low mass, low
2 flow rates with very discreet pumping. So if you've
3 got --

4 MR. FIELDS: Yeah. This was just -- this was more
5 of a passive in situ bio, so they weren't pumping
6 anything.

7 MR. RIPPERDA: Right.

8 MR. FIELDS: They just dumped it in.

9 MR. SLATEN: We may find out that we have such a
10 large mass of water that it's just -- it's not practical
11 to try to get enough potassium bromide in there to be
12 able to detect it. We're still just in the early stages
13 of cleaning this up. But we like to kick these ideas
14 around with our, you know, technical team.

15 MR. RIPPERDA: -- science.

16 MR. SLATEN: Okay.

17 MS. FELLOWS: What planet does Mark come from?

18 MR. SLATEN: So kind of cleaning up other items.

19 OU-2 path forward, as we've communicated in the
20 past, we turned off the last extraction well early
21 September, and we're in the rebound monitoring phase.
22 And we submitted a tech memo describing what was going
23 on on November 1st. So we're going to be watching a
24 six-month rebound phase that we're in right now.

25 MR. FIELDS: What we propose, we did a round of

66

1 vapor monitoring in October. We have another one
2 proposed, a complete round, in the March, April time
3 frame. And then that would give us the six months'
4 duration that we were needing as part of the RDR work
5 plan and then make our decision from past --

6 MR. SLATEN: Groundwater monitoring, third quarter
7 2005, tech memo submitted November 1st. We're doing the
8 fourth quarter sampling.

9 And I guess the question -- we talked about
10 this somewhat, Mark, about how -- whether we do an
11 annual report or a tech memo, and it has to do with what
12 we have also on our FAA schedule, doesn't it, ties into
13 that.

14 MR. FIELDS: I believe, on our FFA schedule, when we
15 had put that together a year ago or whatever, we had an
16 annual report and tech memos in between. And so we just
17 wanted to follow up, do we really want to do something
18 more, similar to what used to be done with an annual
19 report or stick with the tech memos? Are the tech memos
20 sufficient for communicating the groundwater monitoring
21 program?

22 MR. RIPPERDA: I think the data you're giving us is
23 sufficient.

24 MR. FIELDS: Okay.

25 MR. RIPPERDA: It could be called an annual

67

1 report --

2 MR. FIELDS: Okay. We don't have to --

3 MR. RIPPERDA: -- but you don't have to change the
4 content or format.

5 MR. FIELDS: Okay. That would be easier.

6 What we were wondering is maybe we wanted to
7 come back to that, you know, whether there was a lot of
8 boilerplate text or some additional figures or things
9 like that. Okay.

10 MR. SLATEN: Is that the last slide? Just
11 Merrilee's --

12 MS. FELLOWS: And my stuff.

13 MR. SLATEN: Gosh. Where was that on the agenda
14 now? We had --

15 MR. FIELDS: It was supposed to come --

16 MS. FELLOWS: You skipped it.

17 MR. FIELDS: It was supposed to come after this.

18 MS. FELLOWS: I thought you did it because I was
19 outside.

20 MR. SLATEN: We took care of it while you were
21 outside.

22 MS. FELLOWS: It's actually short because we've
23 covered so much of it already.

24 The OU-1 public meeting on the proposed plan
25 tomorrow night, I have copies of the newsletter for you

68

1 guys. I don't know how many of you were on the list.
2 And if you aren't on the list, give us your names, and
3 we'll put you on the mailing list because you guys
4 should all be receiving this in the mail so you know
5 when the public is receiving it, for one thing.

6 And I also have the advertisement that we ran
7 in the Star-News. I've got copies of this, too, so you
8 remember where to come tomorrow.

9 You guys know where to come, right?

10 MR. RIPPERDA: What time should we be there?

11 MS. FELLOWS: You can be there around 6:00. I would
12 expect people -- because they know we give food, even
13 though we didn't advertise it, they'll come probably
14 around 6:30. So we'll get set up between 5:30 and 6:30.

15 MR. TAKARA: Is this the same location where there
16 was that specialist on cancer --

17 MS. FELLOWS: Yes. It's a nice room, and it's kind
18 of up there where people -- the actively interested
19 people live.

20 So we ran this ad -- we run ads in the
21 Star-News announcing the first date of comment period,
22 November 1st, and two ads since then. One will run,
23 actually, I think, tomorrow. We've run one in the
24 Pasadena Weekly, and we've had a number of news articles
25 in the Foothill Leader, La Cañada Outlook, Valley Sun --

69

1 MS. LORI GARNER: Star-News?

2 MS. FELLOWS: Star-News, yes.

3 So we've had really good coverage and a lot of
4 interest and good, fair treatment from the press. And
5 by that I mean it's not all rosy, but it's accurate.
6 And then they're also calling to say, "And in our
7 articles, we're going to put that you're having a public
8 meeting." Even though this time we didn't force it to
9 them, they initiated that and carried it. So I think
10 that's a great help from the press. And we'll find out
11 tomorrow how many people are interested.

12 If they understand the distinction between an
13 on-site plant and off-site, we may not have a lot of
14 people there, but my guess is they'll read it more as
15 just another public meeting, and we'll have kind of the
16 same kinds of people there, perhaps less attendance just
17 because it's a very busy week for a lot of meetings and
18 things going on that night.

19 MS. SANTOS: And you also notified employees --

20 MS. FELLOWS: And I did. I sent an e-mail to all
21 5,000 JPL employees. And we got about six e-mails back.
22 A couple of people were offering technologies to help us
23 out. Some of the standard questions about is the
24 drinking water safe in the faucets here and that kind of
25 thing.

70

1 So those usually -- the people that -- I send
2 out the e-mail in a batch e-mail. It goes out at night
3 at JPL, and usually about 10:00 that night I get four or
4 five e-mails from JPL employees, you know, the people
5 working at night and read their e-mails, and I never
6 hear from anybody after that.

7 MR. SLATEN: So it's the night people that respond.

8 MS. FELLOWS: That's because they are all computer
9 programmers that ask the questions.

10 I think that's it.

11 Any questions on -- I mean, it seems so short
12 for how hard I worked.

13 MR. RIPPERDA: We'll see it all tomorrow.

14 MR. SORSHER: What's the format of the meeting?

15 MS. FELLOWS: Do you want to --

16 MS. SANTOS: Yeah. We're going to -- you know, it's
17 a formal public meeting where you're supposed to have
18 formal comments. So we'll have the meeting transcribed.
19 But what we want to do is not turn it into that feeling
20 of, you know, NASA is just there, people come in, they
21 say whatever they want, so we're going to have kind of a
22 beginning part where there will be some displays and
23 exchange, like a community information session.

24 Merrilee will introduce and talk about the
25 format. Steve will give a brief presentation. He will

71

1 then clarify. If people just have some questions for me
2 versus the comments that you want to make, I will be
3 more than happy to answer that. Just some back and
4 forth. And then we'll make sure we tell people, okay,
5 we want to make sure if you have formal comments, we
6 want to get them on the record and transcribed.

7 MS. FELLOWS: And I'll talk to you guys more about
8 how we're going to work that. I'll make it clear.

9 MS. SANTOS: And at the end, again, we'll invite
10 people to stay if they have any other questions.

11 So, for example, if people start talking about,
12 well, what about -- you know, "What's happening
13 off-site?" "What's happening on-site?" we'll say, you
14 know, "We'll be more than happy to talk to you about
15 that, if you want to stay. Right now, we want to take
16 comments."

17 That's pretty much it.

18 MS. FELLOWS: Are you going to come?

19 MR. SORSHER: Huh?

20 MS. FELLOWS: Are you going to come?

21 MR. SORSHER: I was going to talk to you about that.

22 Do you need us -- do you need us or --

23 MS. FELLOWS: That's what Bob was just asking me.

24 MR. SORSHER: -- want us or -- Jeff was not sure if

25 he would go or if I would go.

72

1 MS. FELLOWS: You know, my guess is it's not going
2 to warrant both of you. We'll be happy to have one of
3 you. Again, we may have health questions that we want
4 some help from Mark or you guys about. We certainly
5 don't want to say, "Gee, we don't have anybody here to
6 answer your questions so we're not going to." So we
7 would be very pleased to have either one of you there.

8 MR. SORSHER: All right.

9 MS. FELLOWS: And if you let Lori know, she'll
10 have --

11 MR. SORSHER: I don't know. I've gotta talk to Jeff
12 tomorrow.

13 MS. LORI GARNER: I mean, I'll have them for the
14 RPMs anyway, anybody that's here.

15 MS. FELLOWS: Ask me the hard questions.

16 MR. SORSHER: Yeah.

17 MR. CAJINA: Usually, they just give us a target for
18 our back, or kick-me sign.

19 MS. FELLOWS: Well, at least this is OU-1, so, in
20 theory, there shouldn't be a lot addressed to you, but
21 it's an open meeting so...

22 MR. SORSHER: Yeah.

23 MR. TAKARA: I'll be there.

24 MR. SLATEN: We don't really know how much interest,
25 I mean, how many people to expect. We have a track

73

1 record of some moderately successful and not too crowded
2 meetings, I mean, after the health meeting.

3 MS. FELLOWS: They've had more exciting titles and
4 have usually done more -- more announcements of it --

5 MR. SLATEN: If people really understand what this
6 meeting's about, it's not too much -- that itself is not
7 too much interest unless they want to come to talk about
8 the bigger picture.

9 MS. FELLOWS: Or ask why we're not talking about a
10 bigger picture. I mean, they might come for that
11 reason.

12 And we had one request in all the things when
13 we sent out the newsletter, including if you want a copy
14 of the proposed plan, call us.

15 Now, of course, most people have it on the web.
16 We got one request from Altadena Heritage, who has their
17 offices at the place where we're having the meeting. So
18 that was interesting, but it's hardly an indicator of
19 massive interest or disinterest. I don't know.

20 MR. SLATEN: Anything else about the public --

21 MS. SANTOS: No. The only thing I'm hoping that
22 Steve will cover tomorrow is something that puts all of
23 this in perspective. There's a plan here that we're
24 expanding, but this is an interim proposed plan, and
25 maybe in January another interim proposed plan --

74

1 MR. SLATEN: February or later.

2 MS. SANTOS: But, at some point, we want the public
3 to understand the entire process about how all this is
4 going to figure out for final remedy for cleanup.

5 MS. FELLOWS: Repeating that January thing.

6 MR. SLATEN: But there is a point -- it's hard
7 enough for us to keep straight interim and then another
8 interim and final and when. So we need to get good at
9 trying to explain that process or even the philosophy
10 behind why we're doing an interim and another interim
11 and then finally a final.

12 MS. FELLOWS: Did everybody get copies of things
13 that they need?

14 MR. SLATEN: Anybody have anything else? No. Then
15 thanks everybody for coming.

16 (At 2:50 p.m. the meeting was concluded.)

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1 STATE OF CALIFORNIA)
) ss.
2 COUNTY OF LOS ANGELES)

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4 I, ANN BONNETTE-SMITH, C.S.R. No. 6108, do hereby
5 certify:

6 That said Transcript of Proceedings was taken
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11 transcript of my shorthand notes so taken.

12 I further certify that I am neither counsel for
13 nor related to any party to said action nor in any way
14 interested in the outcome thereof.

15 IN WITNESS WHEREOF, I have hereunto subscribed my
16 name this 29th day of November, 2005.

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ANN BONNETTE-SMITH

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76