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TRANSCRIPT OF PROCEEDINGS

NASA/JPL CERCLA RPM MEETING

April 3, 2003

4800 Oak Grove Drive

Pasadena, CA 91109

1 APPEARANCES :

2	NAME	AFFILIATION
3	KEITH FIELDS	BATTELLE
4	KIMBERLY GATES	NFESC
5	DAVID CLEXTON	BATTELLE
6	MARK RIPPERDA	USEPA
7	RICHARD GEBERT	DTSC
8	ROBERT KRATZKE	NFESC
9	PETER ROBLES, JR.	NASA
10	LINDA HOLLINGSWORTH	SWDIV
11	JUDY NOVELLY	JSP
12	CHUCK BURIL	JPL
13	RICHARD ZUROMSKI	NAVY
14	GARY TAKARA	PASADENA WATER & POWER
15	MUHAMMAD ZAIDI	LA RWQCB
16	KIMBERLY GATES	US NAVY
17	ALAN SORSHER	CA DJS
18	DAVID YOUNG	LA RWQCB
19	MARK SCHOPPET	NASA
20	JOHN TALLEY	NFESCO
21	MICHAEL POUND	NAVY

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1 Pasadena, California, Thursday, April 3, 2003

2 9:15 A.M.

3 MR. ZUROMSKI: The only person we are waiting for is
4 possibly Rich Aturater, but I'm not sure if he is going to be
5 here, so if we need to send somebody out to get him, we will
6 do that.

7 I want to start off with introductions. And just
8 to introduce some of the new faces around here, we will just
9 start, go around the room. And for the court reporter's
10 sake, when you say your last name, then spell your last name
11 so the court reporter can make sure it's accurate, for the
12 record.

13 And also, one of our other rules that we try to
14 abide by is make sure you try not to speak over anybody else
15 because then the court reporter has a hard time trying to
16 figure out who is speaking, for the record.

17 MR. ROBLES: And speak loudly.

18 MR. ZUROMSKI: With that, my name is Richard Zuromski,
19 and I'm with the Naval Facilities Engineering Service Center,
20 and my name is spelled Z-u-r-o-m-s-k-i, and we'll go to my
21 left.

22 MR. ZAIDI: I'm Mohammad Zaidi. I'm with the California
23 Regional Water Quality Control Board.

24 THE COURT REPORTER: I'm sorry, sir. I didn't hear you.

25 MR. ZAIDI: I'm Mohammad Zaidi. I am with California

1 Regional Water Quality Control Board, Los Angeles. Z-a-i-d-i.

2 MR. SCHOPPET: Hi, I'm Mark Schoppet, S-c-h-o-p-p-e-t,
3 and I'm with NASA Headquarters Code JE.

4 MR. ROBLES: Peter Robles, NASA-JPL RPM. My last name
5 is spelled R-o-b-l-e-s.

6 MR. GEBERT: Richard Gebert, G-e-b-e-r-t. I'm the RPM
7 from State Department of Toxics.

8 MR. SORSHER: I'm Allen Sorsher. I am with the
9 California Department of Health Services. It's A-l-a-n, and
10 S-o-r-s-h-e-r.

11 MS. GATES: I'm Kimberly Gates with the Navy Engineering
12 Service Center at the Navy. And my last name is G-a-t-e-s.

13 MR. BURIL: I am Chuck Buril. I manage the
14 Environmental Affairs program office here at JPL. Last name
15 is B-u-r-i-l.

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

17 MS. HOLLINGSWORTH: Linda Hollingsworth, from the Navy.
18 Hollingsworth, H-o-l-l-i-n-g-s-w-o-r-t-h.

19 MR. KRATZKE: Robert Kratzke with the Engineering
20 Service Center of the Navy, K-r-a-t-z-k-e.

21 MR. TALLEY: John Talley, with the Engineering Service
22 Center, Navy, T-a-l-l-e-y.

23 MR. POUND: Michael Pound, P-o-u-n-d, with the Navy.

24 MR. TAKARA: Gary T-a-k-a-r-a, City of Pasadena, Water
25 and Power.

1 MR. RIPPERDA: And Mark Ripperda, R-i-p-p-e-r-d-a, U.S.
2 EPA.

3 MR. CLEXTON: David Clexton, C-l-e-x-t-o-n, with
4 Battelle.

5 MR. FIELDS: And Keith Fields, F-i-e-l-d-s, with
6 Battelle.

7 MR. ZUROMSKI: That is everybody. I just wanted to make
8 a couple of notes here.

9 As you know, Mohammad is here to take David Young's
10 position as the representative from the Regional Water
11 Quality Control Board, and I guess David was unable to make
12 it today.

13 MR. ZAIDI: He has the flu for the last three
14 or four days, I think. That might have been (inaudible) --

15 MR. ZUROMSKI: I just want to at least welcome Mohammad
16 to the group, and also I want to welcome Mark Schoppet from
17 NASA Headquarters.

18 Mark is probably going to be joining us on more of
19 these meetings in the future, and also I want to let you know
20 you will see today Kimberly is actually going to run most of
21 the meeting that I would normally do.

22 I am actually -- this is going to be my last RPM
23 meeting, and our plan for transition is going to be
24 overlapping over the next six weeks, and we have
25 Kimberly Gates and another person from our Port Hueneme

1 office Brian Harre, who is going to take over where I leave
2 off, and so I'm going to get Kimberly to run a lot of the
3 rest of these items today.

4 MR. ROBLES: Where are you going?

5 MR. ZUROMSKI: It is a secret.

6 I'm going to be gone for a couple of months, taking
7 leave to study for the bar exam, and then in September, early
8 September, I'll be starting a new job with a law firm in
9 downtown Los Angeles.

10 MR. ROBLES: He's going to the dark side.

11 MR. ZUROMSKI: In any event, I just want to let you know
12 we'll probably try to do more coordination over the next
13 month or so, let you know what parts of the program Kimberly
14 is going to take, what part Brian is going to take, and how
15 the rest of the program is going to work.

16 And we will just let you know via e-mail and other
17 communication modes. Maybe one of our teleconferences will
18 be able to finalize things in early May. So I want to let
19 everybody be aware of that as well.

20 I have on the agenda Item 2 Project Overview and
21 Schedule, and Kimberly and I talked about this last night.
22 We're going to go through the schedule as it happens.

23 For example, on Unit 1, we are going to talk about
24 the Operable Unit 1 schedule. We are not going to go through
25 the whole project from the beginning. It is a little

1 confusing to start out with the overall schedule and then
2 kind of skip around after that, so what I'm going to do is --
3 we're not going to be able to get the schedule up?

4 MR. CLEXTON: Yes. This computer does not have Microsoft
5 Project.

6 MR. ZUROMSKI: I will do the schedule off the cuff.

7 MR. POUND: I have a floppy drive in my computer --

8 MR. ZUROMSKI: Why don't we start, then, with OU-1, and
9 I'll start working on your computer while Kimberly starts
10 with OU-1, and maybe at the break we will go over the
11 schedule.

12 With that, Kimberly.

13 MS. GATES: Actually, you will know, I'll be kind of
14 running the meeting. It won't be as short as anticipated
15 from the other meetings you have seen me run because I won't
16 be giving all of the presentation, so I have little control,
17 but not quite as much as normal.

18 The first presentation is going to be by Keith
19 Fields. He is going to be going over our plan for the
20 expanded treatability study, which is going to
21 start on the facility, and it shouldn't be too much of a
22 surprise. It is something we have been kind of discussing
23 over the past year, our plan for what to do on the facility
24 for source removal or mass removal.

25 And from there, I'll let you guys take it.

1 Keith and Dave.

2 MR. CLEXTON: I'm getting set up here.

3 MR. FIELDS: Again, thanks. There are some new faces
4 that I haven't met here. And, again, my name is Keith
5 Fields, F-i-e-l-d-s, and I work for Battelle. We are a
6 contractor with the Navy and NASA.

7 What we want to talk about today is an expanded
8 treatability study that is being proposed. It's something
9 that has been discussed, as Kimberly indicated, over the past
10 year, so as something that was on the horizon.

11 And what we're going to talk about today is NASA's
12 proposed approach at this point. We'll go through a little
13 bit of background.

14 Chuck.

15 MR. BURIL: Keith, were you planning on making that
16 presentation available either electronically or a hard copy
17 of it after the meeting?

18 MR. ZUROMSKI: No.

19 MR. FIELDS: One point, if there are any questions as
20 we're going through, speak up, because I am going to be more
21 than willing to deviate from the slides here.

22 This expanded feasibility study is appropriate at
23 this point to take feasibility testing to the next level.
24 Over the past couple of years, they've tested many
25 different technologies on facility - most of the testing has

1 been done near Monitoring Well 7. And so this is just taking
2 it to the next level, expanding that out, in preparation for
3 future remedial actions.

4 We'll go through a little bit of background.

5 Yeah, Richard is showing you where MW-7 is.

6 It will be clear on the next slide as well.

7 We'll talk a little bit about the feasibility
8 evaluation and then go into the proposed treatment, the
9 proposed approach for the expanded study.

10 Next, Dave.

11 Okay. To indicate what area we're talking about
12 expanding this study for, we're going to call it the test
13 area, and the test area includes those wells that have
14 historically had the highest concentrations of carbon
15 tetrachloride, and perchlorate, those wells being Monitoring
16 Well 16, Monitoring Well 7, and Monitoring 24.

17 And for this test area that's been defined -- the
18 way it's been defined is by concentrations in the saturated
19 zone, ground water that have -- that are greater than 100
20 times the MCL or action level, and that applies for carbon
21 tetrachloride for 100 times the MCL, and it applies for
22 perchlorate per 100 times the action level.

23 So this is the area when we're talking about this
24 expanded study there --

25 I am color blind, but I have been told that is

1 pink. That is the area that we're talking about.

2 Next, please.

3 This gives you another view of that area, just sort of a
4 three-dimensional view.

5 The test area is the area in red. That is shown on
6 this slide. That equates to about an eight acre aerial extent
7 and about 100 foot vertical thickness.

8 So this is all -- where all of this is in reference
9 to the saturated zone to the ground water, and we're talking
10 about an area of about eight acres by 100 foot thick, and that
11 defines that 100 times the MCL/action level.

12 We did some calculations to kind of indicate the
13 significance of this area. This area contains over 68 percent
14 of a dissolved chemical mass, and this can be attributed to
15 this facility at this time while representing less than 3
16 percent of the volume.

17 And in terms -- this is a lot of bang for the buck,
18 so to speak, in addressing this source area, or this test
19 area.

20 Also, the intention of any on-facility remedy would
21 be in conjunction with an off-facility OU-3 action, whatever
22 those might be, to decrease that operational duration.

23 So if we can address source area, hopefully, that
24 will decrease operations duration of an off-facility remedy,
25 which can be very expensive.

1 The objectives of our study that we had defined,
2 one, is to reduce chemical mass in the OU-1 test area, and
3 that has to do with source reduction. Just what we were just
4 talking about.

5 The second objective would be to identify the most
6 cost effective remedy for OU-1. There is going to a
7 comparison. We will get into that in subsequent slides, but
8 there will be a comparison of approaches, but we will be able
9 to identify, hopefully, the most cost-effective approach, and
10 then we also want to design a flexible system that can be
11 incorporated into any final remedial action for
12 Operable Unit 1.

13 Next, please.

14 NASA and Battelle did do an initial feasibility
15 study, feasibility -- I won't call it a study. I'll call it an
16 evaluation. And what that included was a close look at the
17 literature for what are solid treatment technologies and
18 approaches that have been tested elsewhere.

19 We looked at other federal facilities, primarily
20 Aerojet and what's been successful there, and we also
21 incorporated, obviously, all of the pilot test data that NASA
22 has done over the past couple of years into this feasibility
23 evaluation.

24 And two techniques kind of came out of that
25 evaluation. Both of them included ground water extraction,

1 in that target test area.

2 Both include ground water reinjection in the test
3 area, and both include activated carbon treatment for VOCs.
4 So activated carbon, that's granular activated carbon (GAC),
5 is an EPA presumptive remedy, so there wasn't a lot of
6 evaluation of that. And where the real evaluation came in is
7 what is going to be used to treat perchlorate to meet ground
8 water reinjection standards. And two techniques came out of
9 that as being potentials.

10 One is fluidized bed reactors, which has been
11 tested on-facility, and there's actually, I think, four full-
12 scale implementations of that technology right now. All of
13 them are by a contractor, the vendor whose name is Envirogen.
14 I am sure you -- most of you are familiar with this because
15 that testing was done on-facility.

16 That test on-facility was successful. It's
17 technology that has been proven effective. It has gone
18 through some of the hurdles of, you know, initial testing,
19 and with the --

20 Yes, Richard.

21 MR. GEBERT: The initial testing that was done at the
22 same location?

23 MR. FIELDS: The initial was done right near MW-7.

24 MR. GEBERT: Okay.

25 MR. FIELDS: And that initial testing, I think, was

1 six gallons per minute. It was just to test feasibility of
2 that option, and it proved to be feasible. It looks like it
3 is going to be a good option, so now it's being carried
4 forward to the next level.

5 The other test, the other technique that we were
6 going to look at is in situ bioremediation. While this has
7 the potential to be more cost effective than fluidized bed
8 reactors, it also has more uncertainties. There's no
9 full-scale implementation.

10 There is some success with it at Aerojet, which
11 indicates the possibility of that, and there's been microcosm
12 study on-facility that indicate that it could be used -- it
13 may be effective to reduce perchlorate concentrations, but
14 implementability is still a big question. But it did get
15 carried through because it has the potential to be more cost
16 effective than FBR.

17 MR. ZUROMSKI: Hopefully, we didn't talk about it, but
18 when we talked a little bit about our OU-1 in situ system
19 that we're going to be incorporating with the data into
20 this study, we'll talk about that a little later. That will
21 provide a lot of the backup to what Keith is proposing.

22 MR. FIELDS: The study that ARCADIS is currently doing,
23 information drawn from that would be incorporated into this
24 approach.

25 MR. SORSHER: Do you mean the SVE system.

1 MR. FIELDS: ARCADIS is currently doing ground water
2 study, in situ passive injection of amendments into the ground
3 water.

4 And then the idea here is flexibility. We want to
5 make sure that whatever approach proves effective, the system
6 has the flexibility to implement whichever one is best.

7 Next.

8 This gives you sort of a general overview of what
9 we're talking about there. We have designed this in phases.
10 Phase 1 is the box to the right. You can see the test area
11 outlined that was identified in that second slide.

12 And we have extraction wells that are on the
13 southerly end of this figure. They're in possibly
14 green -- injection wells, normally, which are white.

15 And ground water flow in this general area is
16 generally to the south. We have extraction wells on the
17 southern portion of this, injection wells on the northern
18 portion.

19 You can see where MW-7 is, and we're going to use
20 that same test area that ARCADIS is using for further testing
21 of the in situ bio approach. And that treatment facility
22 location is where the existing -- where all of the pilot
23 tests that have been done so far have all used that treatment
24 facility location, so it's going to be maintaining that area
25 for this purpose.

1 One thing I would like to mention that is both the
2 injection and extraction wells will be designed as multi-level
3 wells.

4 An interesting observation that was made when
5 ARCADIS was installing some of their forms was that there was
6 some stratification within the uppermost hydrostratigraphic
7 unit of perchlorate concentration.

8 That being the case, we wanted to put in three
9 screened intervals so that we're not extracting over an
10 entire 100 foot interval and only getting mass removal out of
11 the top 30 feet.

12 This way, we can focus which area -- we will get in
13 that a little bit more later, but we can focus on the
14 screened intervals that are producing the most mass so we can
15 maximize our mass removal and minimize the flow rate.

16 The system, as proposed, is approximately 100 GPM
17 that would go through the activated carbon and then through
18 the FBR before reinjection. And then there is maybe a
19 slipstream of maybe 15 GPM that would go through the
20 activated carbon and then be used for in situ bioremediation
21 testing.

22 Phase 2, which is the left portion of this figure,
23 would be implemented based upon the success of the first
24 phrase, and whichever approach proves the most effective can
25 be implemented within this scheme.

1 Next, please.

2 There was a model that we created to evaluate the
3 area of influence that would be achieved within these systems
4 and also to look at, you know, do some reverse particle
5 tracking and forward particle tracking to locate the wells.

6 Richard.

7 MR. ZUROMSKI: Is this the same model we used for OU-3?

8 MR. FIELDS: Actually, Richard, it is not. We used the
9 the data that was in the OU-3 model. The input parameters
10 are the same, but we redefined the model boundary
11 because we wanted a much more focused area.

12 We needed much more -- a higher descretion -- I'll
13 use a modeling term -- in that area we wanted a tighter
14 pattern of resolution.

15 And so we made a new model, and also the larger
16 model have general flow patterns in there that are more
17 generalized across that region.

18 And based on some evaluations that we had done, the
19 general flow pattern within this small area is generally
20 south, whereas in the larger area it is generally southeast.

21 MR. SORSHER: Did I understand you are going to do the
22 in situ testing first and then go to the FBR --

23 MR. FIELDS: They will be done concurrently. And you
24 can see in these figures, you can see there's three points.
25 This is treated as the in situ bio point, and these are the

1 FBR injection points. So it's going to be done
2 simultaneously.

3 But you can see that we have -- within Phase 1, we
4 have a nice -- it appears, at least from the modeling, that
5 the wells seem to be located well; we're getting fairly
6 reasonable area of influence.

7 We did look at flow rates that were less than 30
8 GPM per well screen. As I will reiterate, three wells
9 screens per extraction well, so it totals up to 100 -- 90
10 to 100 GPM, but we looked at flow rates lower than that,
11 flow rates higher.

12 Thirty GPM gave the best combination of area of
13 influence and minimal mounding and minimal depression and
14 extraction. So it seemed to be the best approach based on
15 the modeling, and that is to the extent we wanted to use the
16 modeling to give us some indications here. And then the
17 testing during the actual well monitoring and other aspects
18 during the implementation will indicate the effectiveness.

19 MR. ZAIDI: That is based on pump tests?

20 MR. FIELDS: There has been plenty of aquifer tests. It
21 basically, most on this model, which includes information for
22 a modeling test.

23 MR. ZAIDI: When you have one thing a monitoring well or
24 a... did you confirm that the wells in this area are able to
25 produce that kind of flow rate?

1 MR. FIELDS: Yes. This aquifer is a very high production
2 aquifer. We're talking, if we are extracting 90 or 100 GPM, a
3 couple feet of drawdown based on hydraulic conductivity
4 testing.

5 Next slide, please.

6 So we did -- that was Phase 1 modeling. We also
7 did Phase 2 modeling to see what kind of zone of influence we
8 had with that too. That appeared to be in line with what we
9 were hoping for so that the modeling that indicates that the
10 well locations seem to be appropriate, given as much
11 information as we can determine at this time.

12 Next slide.

13 This is just a general sense of what the system
14 layout would be. It is important for NASA and Cal-Tech, what
15 the layout is, because of the dimensions, logistically, and
16 spacewise we are limited at this facility. So this -- the
17 dimensions of the 55 feet x 9 feet would fit into that
18 current yard, which is a definite plus.

19 You can see there's currently in the design two
20 2000 pounds activated carbon absorbers to the source tank for
21 gradient component.

22 The cost and control for the fluidized bed reactor
23 to handle the flow rate, 100 GPM flow rate, it's about 24
24 foot high.

25 There is also a post aeration tank to try to bring

1 the DO after it had gone through the fluidized bed
2 reactor and also get rid of, degrade-- any residual ethanol or
3 carbon source that is used.

4 And then this is the multimedia sand filter to
5 filter out the rest of the biological components and TDS and
6 other aspects before it is injected.

7 Next slide, please.

8 So how are we going to determine if this approach
9 is effective? We have developed two performance objectives.

10 The one is to maximize critical mass removal and
11 minimize flow rate. We alluded to that earlier. And what
12 that means is extracting from the wells that have the highest
13 component of chemicals.

14 So if we determine that the top two screens give us
15 95 percent of our chemical mass, we will just extract from
16 those two. If we determine that all three are producing
17 approximately equally, we will extract from all three.

18 But we have that flexibility. At least some of the
19 initial data we have seen from our study indicates that we
20 may see some stratification.

21 Chuck?

22 MR. BURIL: Are you presenting a diagram of that
23 particular system you have just shown?

24 MR. FIELDS: We have one, but it was very
25 complicated -- I mean to view at this level.

1 We can --

2 MR. ZUROMSKI: The answer would be that we are going to
3 put out a work plan for this after today if the RPMs agree
4 this is a good approach, and all of that information is in
5 the work plan, and it includes all the diagrams, all the
6 engineering drawings, everything.

7 MR. FIELDS: And also, obviously, we want to reduce
8 concentrations of chemicals in the test area. If we're not
9 reducing concentrations, then we have to evaluate other
10 methods.

11 Next.

12 So the recommendations at this point, one is to
13 move forward with this study. If it's in agreement of the
14 group, we will submit a work plan, we will determine the
15 schedule. The hope, I think is, at least within Navy and
16 NASA and Battelle, is that something could even be initiated
17 this year -- by the end of the year and then sort of a
18 Navy-NASA component is to establish these contacts and
19 subcontracts necessary to get this process rolling.

20 So at this point I would be glad to answer any
21 questions you might have.

22 MR. RIPPERDA: What is the transit time for the two
23 different things, well, mostly for the in situ bio? You are
24 injecting it at one place and monitoring it at Well No. 7.

25 What is the travel time for the injectate to get

1 to No. 7? How long is it going to take to evaluate whether
2 it is working?

3 MR. FIELDS: We are going to be using not only MW-7. We
4 are going to be using the wells that ARCADIS is using, so
5 they have an injection point, an injection well, and the
6 various monitoring points that are 15 feet, 20 feet, 30 feet
7 away.

8 MR. ZUROMSKI: About a month from the injection point to
9 the MW-7 --

10 MR. RIPPERDA: Are you going to be using some kind of
11 tracer in the injectate to account for dilution at the
12 monitoring points?

13 MR. FIELDS: Yes. We do have that included in there.

14 Our objective is slightly different from the
15 ARCADIS objective. We are treating, adding enough carbon
16 source to treat the perchlorate and the ground water that's
17 extracted, so there's going to be less of a component or
18 concern of mixing and of contact because the water that you
19 are trying to treat is there, and then we will be monitoring
20 that out. You know, we do have a component of tracer
21 testing.

22 Richard, you said you had another comment?

23 MR. RIPPERDA: No.

24 MR. BURIL: Are you going to be taking a side stream
25 off the plant that you are planning on here? You

1 are going to use that for the ISEP?

2 MR. FIELDS: Yes.

3 MR. BURIL: Where in the plant would that actually be?

4 MR. FIELDS: That would occur after the activated carbon
5 because the only reason in situ bio would be more cost
6 effective is if you got -- did not have to use the fluidized
7 bed reactor. You are treating -- you are using the aquifer as
8 an in situ bioremediation. You are using the aquifer as the
9 pure bioreactor.

10 So it's going to be after the VOC treatment. We
11 really can't accomplish both, so we want to remove the VOCs
12 first, just as they do at Aerojet, and then use -- focus on
13 the in situ bio with perchlorate treatment.

14 MR. BURIL: As part of your test plan, have you given
15 thought to the idea of making sure that the water that you
16 are taking off at that point is sterile and not picking up
17 something that might give you false readings?

18 MR. FIELDS: There are -- there are sampling points and
19 a sampling plan and all that absolutely in the work plan, and
20 it will be -- that's one of the sampling points after the
21 activated carbon to determine what we're actually dealing with
22 when we move into the in situ bio.

23 MR. ROBLES: Any other questions?

24 MS. GATES: What Richard keeps pointing out for me to
25 talk to you guys about, because he asked me to big-brother in

1 this, is he wants to make sure you all agree to -- are you
2 ready to look at a work plan for this, to review what
3 Battelle is going to propose?

4 If you are, we are ready to e-mail you the work
5 plan by tomorrow.

6 MR. RIPPERDA: Yes.

7 MR. GEBERT: Yes. No reason not to.

8 Mohammad, are you ready?

9 MR. ZAIDI: Yes.

10 MS. GATES: Then I'll e-mail you out Battelle's work
11 plan tomorrow. Hopefully, you'll be able to get us back your
12 comments within 30 days so that we can move forward.

13 MR. ZAIDI: One thing you referred to was, if you are
14 working with bioremediation are you monitoring -- are you
15 using some parameters to monitor bioremediation?

16 MR. FIELDS: Absolutely. Those will all be identified
17 in the work plan, but definitely we have to, one, prove that
18 we created anoxic conditions, so we will be monitoring
19 for DO and possibly potential other things, and we will be
20 looking for reduction in concentrations.

21 And also, like Mark was saying, we need some way to
22 determine, you know, are we just diluting things, or are we
23 actually treating things, tracer test or something to that
24 affect will be needed. So, yes, all those components and
25 also degradation byproducts.

1 We don't expect to see them. If we going to
2 complete a mass balance to any respect, we need to make sure
3 those aren't involved.

4 MR. ZAIDI: Do you expect the water injection -- will
5 you be collecting samples of --

6 MR. FIELDS: Yes. We have sampling locations before,
7 you know, sort of raw water after activated carbon. We will
8 probably have a sample port in between the two carbon units
9 for breakthrough monitoring. We will have a sample location
10 after the multimedia filter. Those multiple locations
11 identified within --

12 MR. ZAIDI: And there would be monitoring points around
13 the extraction wells and also the injection points.

14 Maybe some baseline concentration before
15 everything starts --

16 MR. FIELDS: We did identify some baseline --

17 MR. ZAIDI: You add monitoring points to, I guess, test
18 the effectiveness?

19 MR. FIELDS: Yes. We will be taking baseline samples.
20 We want to use the existing well network to the extent
21 possible. You may be aware a well out here is a significant
22 cost, several hundred thousand dollars.

23 We will identify within the work plan the network of
24 wells that we feel provides the monitoring.

25 This one shows all but a couple. We are looking

1 at the ARCADIS well around MW-7 is more than one there
2 -- MW-7, 24, 16, 13, 8, and then there's also MW-11 out
3 here that we have included in the monitoring well
4 network.

5 You know, one thing we want to make sure is that we
6 are reducing concentrations here, but typically a concern
7 with injection components that you are pushing something
8 away. So these other wells will also provide us that sort of
9 data to make sure we are not pushing anything away.

10 Now, the modeling results indicate that particle
11 injected in one of these injection wells would take 15 years
12 plus to travel to the model boundary, which is still
13 on-facility. So even if we are pushing things a little bit,
14 we have plenty of time to react.

15 MR. ZAIDI: And protection around the injection well
16 would be maintained so that you are really expecting
17 everything to work --

18 MR. FIELDS: Yes. Those wells will be extracting, so,
19 you know, there will be a cone of depression formed.

20 Now, it is complicated somewhat by the cone or the
21 mounding that occurs at the injection wells, but that's all
22 included. That is why we did the modeling, and it appears
23 that all of that works --

24 MR. ZAIDI: Are there any wells, maybe at
25 least one on this site, based on one on the outside, to

1 monitor the extent of the injected area --

2 MR. FIELDS: MW --

3 MR. ZUROMSKI: Can you turn the lights on.

4 MR. FIELDS: MW-11 is here, which would serve
5 that eastern-most sentry well that you are
6 discussing; 22 would maybe; and 13 -- 13 is within the
7 identified monitoring program -- 8, 11, and the three inside
8 the test area. All these other wells are still monitored on a
9 quarterly or semi-annual basis.

10 So the time frame we're looking at here is not
11 something that would indicate we need to monitor monthly.
12 There's a process that has significant travel times,
13 so the current monitoring program on some of these wells is
14 probably adequate.

15 MR. ZAIDI: That's correct.

16 MR. RIPPERDA: Have you resolved the chloride issue for
17 injection of the basin plan?

18 MS. GATES: Thanks for bringing that up.

19 MR. FIELDS: That was a significant consideration.
20 You know, most of us are aware that the two technologies
21 that sort of emerged to the top of perchlorate
22 treatment are ion exchange and fluidized bed
23 reactors.

24 Ion exchange is the current process. The ISEP
25 process has, because of the way -- because when you are

1 regenerating your ion exchange resin, you are using a
2 brine. That brine leaks out as you are running the system,
3 and they indicate that they're going to have an increase in
4 chloride concentration.

5 So that increase in chloride concentration can come
6 from an ion exchange unit. That has been a discussion in the
7 past, and that is what Mark is referring to.

8 And that is one of the reasons why we went with
9 fluidized bed reactor.

10 What we ended up going with -- what we could have
11 done -- one of the other options we looked at was a throw-away
12 resin. It wouldn't have that chloride -- increased chloride
13 problem, but the operational costs for the chloride resin
14 was fairly high, and also there was concern of
15 just transferring the chemicals rather than destroying it as
16 you would with a biologic reactor.

17 The answer is "yes." The injection requirement is
18 background, and ARCADIS is also working on that same issue.
19 So I think as that gets resolved that same resolution will
20 apply here.

21 MR. RIPPERDA: I thought the basin plan adds a number for
22 chlorides that was lower in some cases than the in situ water.
23 So it is not background a number that's lower than background

24 MR. ZUROMSKI: We have been doing for a long time -- we
25 are actually going to be dealing with the in situ study,

1 which is going to start soon, which we'll talk about in a
2 couple minutes, is when we inject the water into the ground
3 that has already been treated, it still has higher levels of
4 chlorides than the 15 that is one of the requirements, but
5 there's the other requirement that is a hundred, so we try to
6 figure out what is the real requirement within the basin
7 plan as well as the general discharge requirements.

8 The order that we reviewed that seemed to be
9 (inaudible). Dave Young provided this (inaudible) was 2002
10 dash 0030. And just -- I'll read you what the analysis
11 was.

12 Within the discharge limitations of this general
13 permit, the discharge of waste shall not cause the mineral
14 constituent which is chloride of the receiving ground water at
15 the compliance point, down gradient outside the application
16 area in excess of applicable limits within attachment A.

17 We are talking about anything outside the
18 application area, which we're going to assume is the facility
19 because, you know, what we define as the application area is
20 probably what's going to make this work or not work.

21 As you know, if you look at our quarterly ground
22 water samples, we have ranges of chloride on the facility. So
23 what do you pick as the background level? Anywhere within
24 that range.

25 So what we said is that we're considering

1 Monitoring Well 7 to be outside the influence of the
2 application area and we'll model fate and transport of bromide
3 as a tracer for the in situ study and chloride in the water to
4 be injected and found that neither constituent will show a
5 marked increase in concentration, and so that the limit in
6 attachment A of the waste discharge requirement is for
7 chloride in the Pasadena area is 100 milligrams per liter,
8 parts per million, so as long as we don't exceed injection of
9 100 PPM of chlorides, we should be okay.

10 In the test area, we're going to be extracting -- I
11 think in the past we have seen anywhere from 20 to 40 gpm,
12 which is above the 15. And by using the FBR, we're going to
13 be adding very little to it if any at all.

14 As long as we are still injecting within that
15 range, we shouldn't have any problem. We're going to try to
16 demonstrate this through our in situ study first. That issue
17 will be resolved.

18 MR. RIPPERDA: Do you have to get a permit from
19 the Regional Board for this?

20 MR. ZUROMSKI: No. It is a general permit that you
21 follow of the general permit that is on file with the Regional
22 Board.

23 MR. RIPPERDA: So that is a general permit that the
24 Regional Board has available for anything approved by your
25 management for them to do?

1 MR. ZAIDI: Well, basically designs for any facility, and
2 they are -- they have the levels, but they are
3 based on the background, if the local background is much
4 higher than the natural background, if it is not
5 because of the facility.

6 It should not exceed the background. So it is
7 within the background levels, that's okay.

8 It has to be proven, that it is in the background.

9 MR. RIPPERDA: Is the general permit somewhat new --

10 MR. ZUROMSKI: I think it came out in late 2002.

11 MR. RIPPERDA: A year ago --

12 MR. ZAIDI: But I think the reason they wanted to make
13 their life easier so --

14 I'm not seeing that yet.

15 I have seen one of them, but they are totally
16 different requirements. Not especially from this facility.

17 MR. RIPPERDA: And there is --

18 MR. ZUROMSKI: And this is in the work plan. It shows how
19 we are going to monitor while we're extracting in the area
20 that we're back. We're reinjecting and how it should be
21 between the two --

22 MS. ZAIDI: Background should not be exceeded, if you
23 have checked the background, like baseline levels. They are
24 not exceeded.

25 And in those background areas where the sample that

1 is collected, they were not affected by any previous land
2 use. Real background, then I think we'll be okay.

3 MR. BURIL: Is the range, the acceptable point of
4 compliance a consideration, or is it a given number within
5 that range?

6 MR. ZAIDI: Well, if there's a range within the area,
7 then it's natural, and I think we have to consider that range.

8 MR. BURIL: That's fine.

9 MR. ZAIDI: But it was one consistent level before
10 anything began, then yeah, then we will consider that
11 one level.

12 MR. BURIL: The reason for my question is whether or not
13 it would be a situation where the lower part of that range
14 would be the target as opposed to the upper range
15 consideration -- this is higher range.

16 MR. ZAIDI: (Inaudible) I think we'll go by the local
17 levels also, what the local -- what the agencies are.

18 I think our objective is of the normal quality
19 here. So if the water supply well is whatever is
20 established, if that -- our goal will be to meet that.

21 MR. ZUROMSKI: Which for us is easier than the basin
22 plan. Because the water actually is one of our biggest
23 problems with our last test.

24 We were going to try to use drinking water for
25 water; however, the drinking water requirements are much

1 more -- they are about 250 PPM, so we have -- we actually
2 couldn't inject the drinking water, and we're okay with
3 the background levels. The biggest issue we need to get rid
4 of that water, what do we do with it.

5 MR. ZAIDI: If the background is above -- if the natural
6 background is above the MCLs or something like that, I guess
7 we will be spending a lot of money and not getting anywhere.

8 MR. SORSHER: Is that kind of a new policy with the
9 Regional Board in the last year -- or two or three?

10 MR. ZAIDI: 9249, antidegradation, and I think 68,
11 16 -- I am forgetting the exact numbers they allow us
12 to clean up the water to background levels. So the
13 background levels, if they are naturally high, can't do much
14 about that.

15 MR. SORSHER: Is there a copy of these general permits
16 available? I would like to --

17 MR. ZAIDI: It's kind of normal or something like that.

18 MR. FIELDS: Are you talking about the general waste
19 discharge permit?

20 MR. SORSHER: Is that what you call it?

21 MR. ZAIDI: No.

22 MR. FIELDS: You were talking about --

23 MR. ZUROMSKI: There are several policies, and as a
24 result of policy, they came out with the WDR, waste
25 discharge.

1 MR. ZAIDI: It can be, like, specific, in some areas,
2 and could be general. So if they find the areas, all these
3 areas can be covered, and they establish these levels
4 based on some -- some previous studies.

5 So if they have established some levels, however,
6 certain area, the general permits are not for everywhere.
7 Some are area-specific. So each could be different.

8 MR. RIPPERDA: Do you have a copy of the general permit?

9 MR. ZAIDI: Yes.

10 MR. ZUROMSKI: It is online on the Regional Board's
11 website?

12 MR. ZAIDI: Let me know. I need to look at that.

13 MR. ZUROMSKI: Here or not.

14 MR. ZUROMSKI: It's an attachment to the website.

15 MR. FIELDS: We provide links to all of those, any
16 regulatory documents we've referenced within the work plan we
17 provided within the website a link to that so that you won't
18 have to go searching for them within the website. But it's --
19 if you go to the Water Board website, the L.A. Water Quality,
20 lower right-hand corner, there's like, that WDR.

21 MR. ROBLES: Do you like the concept so that we can
22 agree to that, want to send you the work plan. If you think
23 we're off --

24 MR. RIPPERDA: I think it is a good, proposed
25 feasibility study. Let's look at the work plan.

1 MR. ZAIDI: Feasibility study is not final yet. Let's
2 see if it is effective or not. If it's effective, then we'll
3 implement it.

4 MR. FIELDS: So with that, we have plenty of decision
5 points --

6 MR. ROBLES: Okay.

7 MR. BURIL: One other question I would like to
8 understand for my own self. This new waste discharge
9 requirements of general applicability is not permit, policy.

10 Does that in any way relieve the issue of chloride
11 concerns with the ISEP system?

12 MR. ZUROMSKI: Not --

13 MR. BURIL: What's -- that answer, "yes" or "no" --

14 MR. ZUROMSKI: For our interpretation, it would be ion
15 exchange adds over 100 PPM of chlorides, and if I am adding
16 100 PPM of chloride, you are not going to get good, clear
17 background.

18 So, again, those two factors that (inaudible)
19 short. That's why we then got the proposal from Calgon to
20 look at a more selective ion or selective resin because
21 then that puts out less chloride, still more than the
22 FBR within the background.

23 But for the two reasons of it still putting out a
24 little more chloride and operational costs were more overall
25 than the FBR, we decided those two factors, even that ion

1 exchange for reinjection.

2 Different for drinking water purposes than
3 injection purposes.

4 MS. GATES: Ready to move forward?

5 I guess the next thing we're going to go over is
6 the in situ pilot study. We have had a couple of
7 complications.

8 One of the wells, which was at first intended to be
9 the injection well, did break or crash when they were
10 constructing it. I don't know what the exact terms are.
11 It's broken.

12 And what they have decided they're going to do is
13 resleeve it from a six-inch well down to a three-inch
14 monitoring point and use one of the original wells that was
15 going to be a monitoring point as an injection well. It's over
16 a couple of feet.

17 So it's not going to make too much difference in
18 terms of the layout or strategy for monitoring in the in situ
19 study. So we're kind of waiting for them to finish that up.
20 It shouldn't be that long before they do do that. And I
21 imagine we're going to get along with the injection problem
22 by the end of the month.

23 MR. ZUROMSKI: I think the schedule -- and I'll go over
24 the OU-1 schedule too. The schedule right now seems to be
25 we're working on contract issue because one of the issues

1 under the contract, you know, whose at fault and who pays for
2 it, does the government pay for it. I think the contractor
3 is going to take care of it for you.

4 MR. TALLEY: We had a conversation with contracts and
5 contractor on Tuesday. There is a little bit of posturing
6 going on, but we made them an offer they cannot refuse, and
7 they're going to -- we'll have an answer tomorrow, but
8 they're going to take care of it and get on it now.

9 MR. ZUROMSKI: And probably give us about a week to
10 coordinate with the facilities. We're going to be back in
11 that area where MW-7 is. We're going to move our equipment
12 to that already fenced area to resleeve the well. I think
13 they said it is going to take a couple days, two or three
14 days, developing the well, and hopefully we can start the
15 project.

16 MS. GATES: We are still on schedule for the end of the
17 month to begin injections for the in situ pilot study. Things
18 are moving along with that. Did you want to take the break
19 now, or did you want to move on?

20 MR. ZUROMSKI: Let me just, since I wasn't able to show
21 the schedule that I wanted to show you, because I'll bring it
22 after lunch, here is our general schedule for the expanded
23 treatability study.

24 Our plan is -- our first goal is to make sure
25 everybody at the RPM agreed to the concept. So we're going

1 to give you the draft version of the work plan on Friday.
2 We're going to give you 30 days after that to review the
3 document, provide comments to us, if that, or sooner, we will
4 love sooner, and basically at that point -- the sooner we get
5 the comments, the quicker we can move into the field.

6 We would address your comments. If anything major,
7 we would start contracting and implementing the system that
8 looks like probably in -- start contracting in May and toward
9 the end of May, and we are hoping to start drilling wells
10 this summer.

11 And I think Keith indicated earlier our general
12 goal is by November timeframe to actually start the system.
13 So we have a fairly aggressive schedule.

14 And I think some of the key issues to make the
15 schedule work are getting comments back in the work plan,
16 making sure that you guys think this is a good idea, and move
17 forward with it, and from our end basically get the contacts
18 going, get the wells and everything coordinated with the
19 facility, make sure we're not, we know -- we're going to
20 disrupt things, but make sure we're not disrupting things too
21 much, and then from there getting the system installed and
22 implemented.

23 I think it's definitely a realistic schedule, if I
24 were able to show it to you, but it all depends on a lot of
25 cooperation between all of us here in the room, too, so --

1 MR. ZAIDI: I think it would be a good idea where
2 this -- these technologies have been effective.

3 MR. FIELDS: It is in the work plan.

4 MR. ZUROMSKI: What are some of the sites.

5 MR. FIELDS: The most notable site is Aerojet. They
6 have a 4000 GPM FBR. There's also two sites in Texas.

7 MR. ZAIDI: Any adverse -- any negative results of those
8 technologies, or have those been taken care of?

9 MR. FIELDS: A big problem, typically, with aboveground
10 bioreactors is clogging and components like that. Those are
11 associated with fixed bed reactors. This is a fluidized bed
12 so you maintain fluidization of the bed test water, and you
13 don't get that, the clogging issues, with that.

14 Now, you do have biomass that you have to deal with
15 that. They have a biomass recovery system -- a biomass
16 buildup. It kind of flows to the top, and they skim it off
17 and try to get some of the media, the growth media back in
18 the injection, but that biomass is a waste product, but it
19 has to be dealt with.

20 Chuck has had past experience, I believe he has told
21 me, but have some organics bleed through your system, and they
22 can clog up an activated or multi-media filter, and that's
23 something that, you know, Envirogen has had to deal with at
24 Aerojet and other places.

25 And the approach that they came up with, that is

1 more frequent backwash, and also this multi-media filter
2 rather than a sand filter, the multi-media filter gives
3 you longer run because you have the largest particles at the
4 top and down that way rather than just uniform particle size
5 where you get clogging or plugging on that top layer.

6 So one nice part about fluidized bed reactors.
7 They have three -- two, three solid years of operational
8 experience that we can gain, and hopefully not have to go
9 through some of those same issues they have addressed at the
10 other sites.

11 MR. ZAIDI: You have all the negative aspects, how they
12 will be taken care of, although they may be minor, but still,
13 the remedies apply --

14 MR. ROBLES: It's kind of give an idea -- contingency.

15 MR. ZUROMSKI: That is for the reinjection as well.

16 MR. FIELDS: I think, when you read the work plan, you
17 will see that there's no indication that everything is a
18 guarantee. We're trying to set up many different components
19 to evaluate those different items that we feel to be issues.

20 I think the biggest issue is biofouling, clogging of
21 your injection wells, so that is something that is really
22 going to be a focus. It is even a bigger issue with in
23 because you are adding carbon source, situ bio you want bio
24 remediation, biomass to grow, and that is an issue that we
25 realize is going to be something that has to be addressed and

1 that is going to be part of the testing.

2 That is maybe the most important component of
3 whether the in situ bio is going to be feasible is the
4 clogging. So I think that you will see we tried to identify
5 some potential issues, and hopefully we will have the
6 monitoring approach to address those.

7 MR. SORSHER: How long does that kind of clogging
8 problems or formation take to develop, and how does that
9 compare to the time you project to run the treatability test?

10 MR. FIELDS: As you might expect, it is dependent on a
11 lot of factors, on how quickly it happens, and there's been
12 several methods developed for addressing that, from pesticides
13 and biocides that you feed into that to kind of minimize that
14 growth around your well screen, to adding an oxidant like some
15 strong oxidant that would oxide some of that biological
16 material around the well screen, to freezing it to pumping it,
17 like purging it real hard to blow it out and extracting it.

18 Kimberly has had a lot of experience with that at
19 another site. So it's likely there's not, like, one
20 technique that is the obvious choice at any given -- every
21 site, so it is going to be a situation.

22 MR. SORSHER: Around the screen and the --

23 MR. FIELDS: Filter pack.

24 MR. SORSHER: Rather than in the formation itself.

25 MR. FIELDS: And what manifests itself and amount,

1 higher amount, you know, all get more biological growth there
2 has harder for the water to enter the aquifer, you will see
3 mounding occur so we have monitoring approach to make sure you
4 are not, we will be monitoring mounding --

5 MR. SORSHER: Back pressure.

6 MR. ZAIDI: Maybe redevelopment of the --

7 MR. FIELDS: That is a common approach as well.

8 MR. TAKARA: Is anyone from the Raymond basin a
9 recipient of the work plan?

10 MR. ZUROMSKI: For the pilot study.

11 MR. TAKARA: Pilot study.

12 MR. ZUROMSKI: Rich Atwater, who is not here today, will
13 probably get a copy of that. And, actually, it would be
14 available to the public once it is final, so anybody would be
15 able to see it.

16 MS. GATES: Do you think now is a good time for a break?
17 It's a little bit earlier in anticipation of when we decided.

18 Does that work for your schedule?.

19 MR. RIPPERDA: I have to go at 10:30.

20 (A brief recess was taken.)

21 MS. GATES: So going through OU-2, I guess the first
22 thing we're going to talk about is the RDRA document. We have
23 received almost all comments. We were wondering if the
24 Regional Water --

25 MR. ZAIDI: I'll get to that early next week.

1 MS. GATES: Oh, okay. As soon as we receive comments
2 from Mohammad, we will finalize the document, and that will
3 be out on the street. And we're moving forward.

4 The next is the pilot test status. We finished up
5 kind of what we were doing at the first extraction well, and
6 things did well there, but we started reaching asymptotic
7 levels, so we decided that we're to move it to the next well
8 location.

9 MR. ZUROMSKI: There is where we are now, and we're --
10 the buildings aren't clearly marked, but we are going to be
11 moving about right up here, which is --

12 MS. GATES: VEO-2, I believe. And VEO-1 is much further
13 south. There you go.

14 We're going to move to VEO-2. The next extraction
15 well -- we should be doing that -- from what I have heard
16 from Geofon, it should be by the end of the month, that they
17 are going to be in place --

18 MS. HOLLINGSWORTH: We're working on the modification
19 right now in the next week or so. They should be moving it
20 by the end of the month. That is the plan.

21 MR. RIPPERDA: What was your total mass removed from
22 where it is now, and what is your current asymptotic removal
23 rate?

24 MR. ZUROMSKI: I think we are moving about -- and it's
25 gone asymptotic at a pound a month, according to our

1 objectives in the SVE work plan, for the pilot study which
2 now, of course, is going to be incorporated, we have a
3 period of either asymptotic levels or 6 months that doesn't
4 mean we don't come back to this well.

5 We're going to move -- it's been about six months
6 we started back in October. We are going to shift to the
7 next well, VEO-2, in the parking lot here. And that -- that
8 was what, I think, we saw was probably the second highest
9 levels of VOCs in the soil vapor, so hopefully this should be
10 interesting to see what type of levels we can remove.

11 We run it for six months, or asymptotic levels, and
12 we move to our next location, which is down here somewhere
13 around here, which is probably the least likely to have VOCs
14 we saw some, but probably not as much, because we're on the
15 outer point extents of the plume area in OU-2. So depending
16 on this one. This one might only be operated once.

17 And then we go back to VEO-1, which is the one that
18 Cal-Tech originally (inaudible) and basically go around in a
19 circle following the procedure that we have outlined in the
20 RD work plan.

21 MS. GATES: So then, as Richard already alluded to as
22 well, the remedial action start date, as we move to the next
23 location, we're going to begin this as a remedial action, and
24 we're going to be ending the pilot study. So the process of
25 going through, ending the pilot study and getting off of the

1 permit and working with facilities to get off the permit and
2 move into a circle of remedial action, that should take us
3 about this month, the end of the month for OU-2.

4 MR. ZAIDI: I have my comments like, I was awake
5 last night. So my scribbles, regarding moving the well sites,
6 I was concerned, I believe they have not been drilled yet --

7 MS. GATES: They have. That was done last summer.

8 MR. ZAIDI: I missed that.

9 MS. GATES: Darn.

10 MR. ZAIDI: I wanted to move VEO-2 further north
11 eastward, but when we see the radius of influence, well --

12 MR. ZUROMSKI: The biggest problem is with the well
13 locations. We actually, if -- you might want to ask David --
14 we drew kind of circles where generally the well could be
15 located, and the problem is if you look at the facility map
16 you probably -- the best part is probably right under the
17 building.

18 So what we tried to do is locate them in the best
19 area we could within the facility constraints, so we took a
20 lot of these things into account. We had over three proposed
21 locations for each well at each site, so it was kind of a
22 "Let's find the best place to put the well."

23 It may have been -- that might have been one of the
24 choices, so it could have been in a bad facility location.

25 MR. ZAIDI: Moving a little bit eastward.

1 MR. ZUROMSKI: I thought we had a lot of constraints
2 with the VEO-3. If I want to walk out there, the terrain
3 where we drilled, it starts to drop right after it, and
4 there's a hazardous waste facility on one side, and there's a
5 lot of facility constraints why we had to put it there.

6 MR. ZAIDI: And another was the -- I guess the screening
7 levels -- I was wondering the levels that we used to
8 finally -- to ascertain whether the waste was hazardous or,
9 these have to be.

10 And another thing that I was questioning when we are
11 taking samples from these wells, they have collected. That's
12 already done too. I thought these wells were not in yet.

13 MR. RIPPERDA: What were you going to say?

14 MR. ROBLES: In the future, we still value your comments
15 because we -- when we go through full-blown remediation and
16 expanded, we're going to need your comments still. This is a
17 perfect time to give us your comments as they are.

18 MR. ZAIDI: Well, I was thinking when we are drilling in
19 this area, and there are different types of contaminants, not
20 only VOCs, there are metals, so it would be a good idea not to
21 just fix the sample collection or just to establish that okay,
22 we'll do 40 footer and 120 footer for analysis, but we should
23 also look for individual indications of contamination.
24 Because if we are skipping those visual indications, like
25 screening, is really the -- which is because of the affect of

1 contamination-

2 MR.ZUROMSKI: I think that we actually did this.

3 MS.GATES: That was one of the main reasons last summer,
4 the extraction well, drilling, they were doing a lot of the
5 ARCADIS drilling as well. David was here full time. He did a
6 lot of the visual checks as they were pulling up each of the
7 cores.

8 MR. FIELDS: What becomes important at that facility
9 other than rather some of the visual component is the lower
10 permeability layer, when we would encounter one of those we'd
11 try to get a sample right above it, right in it so that, you
12 know, if that acted as a inhibitor of flow, so that is a good
13 comment, and that's something we tried to address.

14 MR. ZAIDI: Included, so I didn't include that.

15 Another thing was after we are through with the
16 inspection, I guess are we going to go to the different vapor
17 monitoring points, which are much more than these extraction
18 wells and take a sample, take vapor samples and confirm that
19 there have been reduction in the mass?

20 MS. GATES: They still sample on a quarterly basis, as I
21 understand it, and they will continue to do that throughout
22 the remedial action, so we'll be monitoring all the points on
23 a quarterly basis.

24 MR. ZAIDI: Especially those monitoring points which are
25 the hot spots.

MS. GATES: Absolutely. Absolutely. So we can see what
progress we are making, yes.

1 MR. SORSHER: It is a rebound --

2 MS. GATES: That is one of the points included in the
3 remedial action plan is how to test for rebound out.

4 MR. ZAIDI: Also it was mentioned that monthly system
5 operation progress report, and those will be shown, but I was
6 wondering if we could collect samples from the individual,
7 wells like for lab sample, for TI, but lab samples, maybe a
8 monthly basis or whatever. So the lab samples, we can
9 establish them using the lab samples.

10 MR. FIELDS: I believe they are collecting lab samples.

11 MR. ZAIDI: From individual wells.

12 MR. FIELDS: From the extraction wells.

13 MS. GATES: From the extraction wells.

14 MR. FIELDS: I believe they are.

15 MR. ZAIDI: For lab analysis.

16 MS. HOLLINGSWORTH: Well, I'll check. And we can get
17 back to you on it.

18 MS. GATES: Linda will check.

19 MR. ZAIDI: Result of ever going in --

20 MS. HOLLINGSWORTH: I understand what you are saying.

21 MR. ZAIDI: What --

22 MS. HOLLINGSWORTH: I'll doublecheck.

23 MR. ZAIDI: We know how the well is beginning at this
24 point.

25 MS. HOLLINGSWORTH: Okay. And so --

1 MR. ZAIDI: I think it might be easier to review, if we
2 have concentration maps. Just based on PID, that is fine
3 too, but if they have lab analysis, give a visual picture,
4 and it is very quick, comprehensive. That is all.

5 MS. GATES: Well, that's great. I think that we're now
6 at a good breaking point. Yeah. We did do it in 15 minutes
7 or less. How about we take a --

8 MR. RIPPERDA: What is your remedial action start date?

9 MS. GATES: Thank you. Hold on the other side.

10 The remedial action start date is going to be the
11 end of April. We're going to incorporate the comments that
12 we received. If there are any additional --

13 MR. ZAIDI: No.

14 MS. GATES: And we should have remedial action document
15 out within the next week or so and then be started by the end
16 of April.

17 MR. RIPPERDA: Are you going to put that in a letter
18 next week?

19 MR. ZAIDI: Yes, next, yeah.

20 MS. GATES: That is great, and we should be able to move
21 along as planned.

22 So do you want to take a break now until 10:45? Is
23 that good for everyone?

24 MR. RIPPERDA: And what happens at 10:45?

25 MS. GATES: We start --

1 MR. ROBLES: Don't start anything important
2 until you get back --

3 MR. RIPPERDA: OU-3 is the important, so I apologize.

4 MR. ZUROMSKI: Are there any other things that we want
5 to bring up? If not, we can take a break.

6 MS. GATES: All right. Take a break until 10:45.

7 (A recess was taken from
8 10:29 A.M. until 10:45 A.M.)

9 MS. GATES: As I was just talking about with Chuck,
10 we're going to do just the basic update, which Mark already
11 is aware of, and we'll talk to him again over lunch.

12 We're not going to get into all the good stuff that
13 everybody really wants to discuss until after lunch, because
14 I imagine it will take more than the 15 minutes that we have
15 between now and lunch.

16 So I think what I was proposing we go over is just
17 to give you an update, kind of where the EE/CA is. And from
18 my understanding, we have received everyone's comments. We
19 received comments from NASA Headquarters this week. So what
20 we're going to do is we turn those over to our contractor,
21 and we're going to finalize the document within the next
22 couple of weeks, is my understanding.

23 Am I correct?

24 MR. ZUROMSKI: That is correct.

25 MS. GATES: That is correct.

1 Okay. Should we move into the action memo? Do you
2 think that's appropriate without Mark here?

3 MR. ROBLES: If nothing else, when will the action memo
4 come --

5 MR. ZUROMSKI: The action memo right now is in internal
6 draft form, and I just received NASA Headquarters on that a
7 couple of days ago, and I think that we're going to try to
8 finalize the internal comments by the end of this week,
9 which, I guess, is tomorrow.

10 And it's probably going to take the contractor a
11 couple of weeks to turn it around and get the draft out that
12 will go to the RPMs for review. So I would say sometime in
13 the next two to three weeks you should get the action
14 memorandum, which is kind of the decision document that will
15 help us move forward with the removal action.

16 And at that time we will give you a 30-day review
17 of the action memorandum -- draft action memorandum, and, you
18 know, barring any major disagreements or comments at that
19 point, you would go ahead, finalize the action memo, and then
20 after that we would start planning for public meetings, et
21 cetera, but that is all up in the air at this point in time.

22 MR. BURIL: For those of us of with lesser knowledge,
23 what is the action memo?

24 MR. ZUROMSKI: So you are not talking about yourself,
25 then, Chuck?

1 MR. BURIL: We won't discuss who we are talking
2 about --

3 MR. ROBLES: Could you explain the difference between
4 between the EE/CA and action memorandum.

5 MR. ZUROMSKI: Sure. The analogy is like an FS to a
6 proposed plan where your regular CERCLA process, you would do
7 an FS and then do a proposed plan.

8 In the case of a removal action, which is pre-FS,
9 you do an EE/CA, which analyzes in greater detail all of the
10 different options that are being considered for the removal
11 action, and then you summarize that in an action memorandum.

12 The action memorandum, then, is the document that
13 we let the public review for 30 days before -- and, of
14 course, the EE/CA as well because it's also public.

15 But the idea is that, like a proposed plan, you
16 want something that people are actually going to look at
17 because nobody is going to look at a three-inch thick EE/CA
18 when they can look -- hopefully look at a maybe smaller --
19 hopefully smaller -- 20- to 30-page action memo, which will
20 have the key figures and key information that would kind of
21 summarize the whole process.

22 MR. ROBLES: Explain FS and EE/CA.

23 MR. ZUROMSKI: Sure. FS is the feasibility study, and
24 the EE/CA is an engineering evaluation cost analysis, and
25 action memo is an action memo. I won't refer to it as an

1 "AM."

2 But that's generally the process that we're going
3 to go through. So as far as schedule goes, again, not having
4 the schedule in front of us, I know that the general schedule
5 is that we would then -- once the action memo is finalized,
6 we would then put out some type of mailer to the public and
7 the community saying, "We're going to have a public meeting.
8 These documents will be available."

9 Then we would have a 30-day public comment period,
10 and then during that time, we are planning to have a public
11 meeting to introduce the action plan that we're going to be
12 talking about for the removal action.

13 This is something that we're doing above CERCLA
14 requirements, which just says just a 30-day public comment
15 period because we think that is important at this point in
16 time to get the public up to speed with what's going on here,
17 what is proposed, because then, through the 97-005 process,
18 at the end of that process, which is probably not going to be
19 for another six, eight months to a year after this public
20 meeting, we are going to have another final public meeting,
21 and that's right before the system would be implemented.

22 So this is kind of to let everybody know what we're
23 doing, see what the public's general feedback is to what we
24 are proposing, and rather than just getting it through
25 written or whatever other types of media we have got -- see,

1 the problem with that is that it is really hard to gauge what
2 the public is really thinking, and some people, actually,
3 most people are not going to take the time to write anything
4 down. They are more likely to come where we can talk to
5 them, give them the information on a one-on-one basis than to
6 write anything down. So that is the purpose of the whole --

7 MR. ROBLES: How big is an action memo?

8 MR. ZUROMSKI: Well, right now it is too big. That's
9 why I said it is going to take me a couple more days, and I
10 am hoping that it is going to be, probably with figures,
11 maybe a maximum of 40 pages.

12 But the text, the main text, will probably be about
13 10, 15 pages with a good, executive summary of what we got.
14 Everybody who will read that will use the -- you know, the
15 main thing for people to say, "What are you doing?" "Well,
16 here it is."

17 MR. ROBLES: How big was the EE/CA?

18 MR. ZUROMSKI: EE/CA is -- I really couldn't say. It's
19 large. It's probably a few hundred pages plus the appendices
20 plus the figures and the whole thing.

21 MS. GATES: Right.

22 MR. ZUROMSKI: One of the things, we're going to try to
23 put key figures in the action memo and then refer to any
24 other figures that we need to in the action memo refer to
25 EE/CA rather than just duplicating all that again in an

1 action memo. That is not really a memo.

2 MR. ROBLES: Would we want to then -- when we send to
3 the RPMs to make comments, would we send them the action memo
4 and the EE/CA so that --

5 MR. ZUROMSKI: No. Well, they all have a copy. They
6 will have a copy of the final EE/CA that they can refer to,
7 but the EE/CA itself, the document, will be final

8 UNIDENTIFIED SPEAKER: How many pages are you actually
9 thinking of referring in the EE/CA?

10 MR. ZUROMSKI: Not many. Just will be -- figure that it
11 just didn't make sense. The public is not going to care
12 about whether there is a figure that shows geologic
13 cross-sections. Nobody in the public I know of is going to
14 care. And if they cared enough, the EE/CA would be available
15 for comment on as well. There's nothing that prevents them
16 from doing that. No reason to them -- make this -- try to
17 make it a readable document with all these extra figures in
18 there --

19 MR. ROBLES: Do we, in the public meeting, have
20 available the action memo and the EE/CA copies for the public
21 if they want it?

22 MR. ZUROMSKI: They would be at the information
23 repositories.

24 MR. ROBLES: At the public meeting, they might want a
25 copy.

1 MR. ZUROMSKI: Right. But, most likely, we could have a
2 few CDs, but we would prefer them to be in the --

3 MR. TAKARA: Richard, in a couple weeks the draft action
4 memo will be sent out to the RPMs for 30-day comments. Upon
5 receiving those comments, you will finalize them, and then it
6 will go out for a 30-day public comment period, the draft
7 action with the EE/CA --

8 MR. ZUROMSKI: Roughly.

9 MR. TAKARA: I mean --

10 MR. ZUROMSKI: I mean in there, there are a couple weeks
11 for incorporating comments, getting ready to -- it's actually
12 we have a timeframe, we have a time allotted to put together
13 a public information sheet that we would send out for notice
14 that it is available. We're not going to actually send
15 everybody the action memo.

16 MR. TAKARA: Right.

17 MR. ZUROMSKI: We're going to send them a notice that
18 it's available and when the public meeting is. That is
19 something we coordinate with the City and also the RPMs to
20 make sure that everybody is agreeing to having the public
21 meeting and what's being said at the public meetings.

22 These are things that I don't think are really
23 beyond the scope of what we're going to talk about here
24 today. It's just kind of more for informational purposes.

25 MR. TAKARA: And Water and Power would be receiving a

1 draft action for comments?

2 MR. ZUROMSKI: I am not sure exactly how it's going to
3 work.

4 MR. ROBLES: We usually work from the Raymond Basin,
5 like we give Atwater a copy, and he then is supposed to
6 coordinate with all the members of the board.

7 MR. TAKARA: Well, is there a way that we could get it
8 directly?

9 MR. ZUROMSKI: I think that we're going to --

10 MR. TAKARA: Well --

11 MR. ZUROMSKI: And I think that's something that we will
12 definitely have to talk about. I think it's a good --

13 MR. ROBLES: Again, I don't see a problem. I have will
14 to coordinate with my folks. I don't see a problem because
15 you are part of the public, but I have to coordinate with my
16 people. So we'll get back to you on that.

17 MR. TAKARA: Okay.

18 MR. ROBLES: But definitely we work through the Raymond
19 basin as the focal point, and hopefully he's sending out that
20 stuff to all of the members --

21 MR. TAKARA: Yeah. But, you know, how things slip
22 through and --

23 MR. ROBLES: Got it.

24 MR. TAKARA: He's not here, so --

25 MR. SORSHER: I am kind of wondering, even with like a

1 20- or 40-page action memo, how much the public will absorb
2 that, and have you considered maybe when you mail out your
3 notice to have, like, a two-page or four page fact sheet --

4 MR. ZUROMSKI: I think that, when we did our last public
5 meeting for OU-2, we did prepare frequently-asked questions,
6 a fact sheet on those actions at the time these are all the
7 preparing in addition to the things we would be action memo.

8 The action memo is the official CERCLA document
9 that we have to do. All those other things that we've been
10 preparing.

11 That is why, when I say it's hard to tell you the
12 exact timeframe because there is no real exact timeframe. We
13 have to develop the mailers, we have to develop these types
14 of public relations tools, and we have to develop them with
15 the City, if we're all going to go and have a public meeting
16 together, so I am just giving you the CERCLA documents.
17 These are the timeframes.

18 We are proposing that hopefully sometime this
19 summer we could have a public meeting. That is our goal
20 right now.

21 MR. SORSHER: That would be the first one?

22 MR. ZUROMSKI: Right.

23 MR. ROBLES: You are asking, Alan, for Cliff notes?

24 MR. SORSHER: Yeah, yeah.

25 MR. ZUROMSKI: We did, actually, for OU-2 we had a

1 handout. It was a back-and-forth page handout that had
2 frequently-asked questions. We had another one, I think,
3 that had a summary of SVE -- it was kind of like a summary of
4 the proposed plan. And so I think that we would be doing
5 similar documents, for this is a kind of community relations
6 tool. We would also have other documents as handouts that we
7 had at the last public meeting.

8 We had a booth set up where we had information
9 booths for each of the regulatory agencies in addition to
10 having them bring documents, so we had a lot of information
11 there. And then the official presentation was of the actual
12 action --

13 MR. SORSHER: How many people showed up at that meeting?
14 Are there any environmental groups following this?

15 MS. GATES: Yes.

16 MR. ZUROMSKI: I think that -- what did we have? --
17 about 40 people at each meeting?

18 MR. FIELDS: Between 20 to 40.

19 MR. ZUROMSKI: Twenty to 40 at the three meetings.

20 And then there were some groups there -- not
21 necessarily environmental groups for the OU-2 actions, more
22 of water purveyors, City of Pasadena, Lincoln Avenue, Raymond
23 Basin Management Board. Not a lot of environmental groups
24 were following us then. We have talked with other
25 environmental groups since then. And so we would presume

1 that they would be there.

2 MS. GATES: We would probably have to send invitations.

3 MR. ZUROMSKI: They would be on our mailing list.

4 MS. GATES: Right. To attend.

5 MR. ROBLES: How many do we have on our
6 mailing list?

7 MS. GATES: Oh, my goodness. What is it up to now?

8 MR. FIELDS: Over 5,000.

9 MS. GATES: Over 5,000 people, including groups.

10 Well, I think before we get much further, we are
11 hitting upon eleven o'clock, and you have your meeting at
12 11:00.

13 So how about we break now for lunch and then get
14 into the nitty-gritties of 97-005 and further issues which --

15 MR. ROBLES: After lunch.

16 MS. GATES: Right. Any additional issues that we might
17 have after lunch.

18 MR. ZUROMSKI: Okay.

19 MR. ROBLES: Could you take them down to 303. Okay.

20 MR. ZUROMSKI: So we will go take a quick lunch break
21 and come back. And we want to be back --

22 MS. GATES: We'll be back by noon.

23 MR. ZUROMSKI: If we can be back -- yeah, if we can be
24 back by noon, I am thinking we can get out of here in less
25 than an hour after lunch.

1 MS. GATES: Hopefully.

2 MS. GATES: People have to drive back.

3 (A luncheon recess was taken.)

4 (At 12:00 P.M. the proceedings resumed.)

5 MS. GATES: Do you want to start where you left off?

6 MR. ZUROMSKI: I was done.

7 MS. GATES: The last session is your session, then.

8 MR. POUND: So the meeting is now concluded?

9 MS. GATES: Do I get to run it, then?

10 MR. ZUROMSKI: So we went over the first bullet, and the
11 second bullet, for the most part, we know is basically
12 talking about the schedule.

13 97-005, the only update we have is that we have
14 completed the sampling analysis. I think that's all gone
15 final, and DHS has reviewed that.

16 Is that correct, Alan?

17 MR. SORSHER: Right.

18 MR. ZUROMSKI: So the next document we were working on is
19 the source water assessment, and it's a draft document. I
20 think it is complete or is to be complete fairly soon. I think
21 that the City's seen it and commented on it. The Navy and NASA
22 have commented on it.

23 And it would go out for DHS review as soon as
24 that document or draft is ready to do. I think that it
25 is -- like I said, it is almost ready to go out. I'm not

1 sure exactly what the release date will be. For
2 the most part, it is done.

3 MR. SORSHER: What kind of ballpark timeframe?

4 MR. ZUROMSKI: I would think that within the month of
5 April it would come out. I couldn't pin a date on that.

6 And then from there, the schedule would be just as
7 you have talked with us in the past. We have already started
8 putting together some of the documents, but, you know, they
9 fall in line right afterwards as with the other steps for
10 97-005.

11 MR. SORSHER: Okay. Just to bring everybody up to
12 speed, informational item, we had had a meeting with the City
13 and several of you folks back in November of last year.

14 And Gary, I think that was in October, actually,
15 November 20th, we got a letter from Gary asking for some
16 clarification on some issues, some interpretation of the
17 policy. Do you remember that?

18 And we sent out a letter January 28, and I guess we
19 sent it to Gary, Peter, Richard, and CHZM Hill, so if
20 anybody else wants a copy, we can get you a copy of it.

21 Basically, Gary was asking if they operate some of
22 their additional wells such as --

23 MR. TAKARA: Ventura and Windsor.

24 MR. SORSHER: -- Ventura and Windsor wells, would they
25 have to have a 97-005 for those wells. And basically, no,

1 the answer was "no."

2 The idea, if we do a good 97-005 on the upgradient
3 wells, a thorough job, unless something changes and we need
4 further information, but I think we pretty much clarified the
5 (inaudible). I haven't heard back from anybody on it.

6 MR. ZUROMSKI: I have one question that I wanted to ask.

7 It is along those lines. So it seems like, then,
8 what you are saying is that if we did a thorough enough job
9 on the Arroyo and 52 that that would be sufficient for the
10 97-005 process?

11 MR. SORSHER: Right.

12 But only what -- I think we recommended -- I think
13 it's on the second page -- was that somewhere in the
14 97-005 process, if there's an anticipation that you will be
15 using other wells for that equipment, put that in there just
16 to discuss it, you know, the whole thing is going to go
17 for public review, so there's nothing -- nothing hidden in
18 it.

19 MR. ZUROMSKI: Okay.

20 MR. SORSHER: But the idea, if there's a recent
21 97-005 for upgradient wells, the contamination
22 sources are the same, and there's really no reason to do a
23 separate 97-005.

24 MR. ZUROMSKI: One of the questions I have -- this has
25 kind of come up recently -- you guys restarted some wells in

1 the Sunset area.

2 MR. TAKARA: Sunset.

3 MR. ZUROMSKI: And what we are trying to better
4 understand the 97-005 process because they restarted some
5 wells -- the City of Pasadena restarted wells in the Sunset
6 reservoir area, and we didn't quite understand then how would
7 we -- would 97-005 be applicable to that startup, and how
8 would that be different from the startup at Windsor and
9 Ventura? Just for kind of for clarification of the policy.

10 MR. SORSHER: Which wells did you start? Are they on --

11 MR. TAKARA: He is referring to the five wells that we
12 were blending in the Sunset reservoir.

13 MR. SORSHER: Right. Just temporarily because you
14 were --

15 MR. TAKARA: There was an opportunity because of
16 Metropolitan Water District was working on -- my
17 understanding still currently working on some retrofits to
18 their intakes from the Colorado River; therefore, all the
19 water coming from MET was 100 percent State water project.
20 That gave us the opportunity --

21 MR. SORSHER: Water --

22 MR. TAKARA: -- levels, gave us our ability to blend two
23 to three of our Sunset reservoir wells with the Met Water,
24 and we did a rotation with five wells. We rotated it.

25 So our schedule is to shut off all the three wells

1 that are currently on right now for the Sunset April --
2 actually April 3rd. That was yesterday -- today, today.

3 MR. SORSHER: Yeah.

4 MR. ROBINSON: So it was a temporary --

5 MR. TAKARA: Two month opportunity --

6 MR. ZUROMSKI: There was no way to use a similar type of
7 temporary opportunity at the Windsor, Ventura wells?

8 MR. TAKARA: I have no idea. My understanding from what
9 DHS has said is that those other wells are part of the
10 operable unit which --

11 MR. SORSHER: Probably -- are not the perchlorate levels
12 higher there? You may not have been able to blend them down
13 anyway.

14 MR. BURIL: Gary, your reason for shutting off the wells
15 in the Sunset area was, again, what?

16 MR. TAKARA: It was we were above the four,

17 MR. BURIL: Okay. And the fact that you didn't shut
18 those down as a result of that consideration did not trigger
19 97-005 automatically?

20 MR. SORSHER: No. Nothing really triggered 97-005
21 automatically. It's really -- well, actually, you know,
22 they still had authority to use those wells. I mean, a
23 system is allowed to use water above the action level. We
24 can only suggest when it gets much higher above the action
25 level, ten times or a hundred times, we only recommend.

1 We do not have any statutory requirement forcing them to
2 shut it off. They still had the option of using those
3 wells.

4 MR. RIPPERDA: Isn't 97-005 applicable to new treatment
5 systems in an operable unit --

6 MR. SORSHER: It is for assessing and, again, the full
7 title is policy guidance for direct domestic use of extremely
8 impaired sources. So it could be other impaired sources
9 other than OU, but it's generally new sources.

10 MR. ZUROMSKI: So it seems, then, at least when I
11 remembered, the last samples that we received from the
12 Ventura and Windsor wells, those levels at that time seemed
13 low enough to be able to blend.

14 But it seems the distinction they are making that
15 not necessarily that they couldn't blend, but you are saying
16 that Windsor and Ventura are in operable unit whereas the
17 other wells are not, and that is the distinction that you are
18 making? I guess that -- these are things that we don't
19 understand about the policy.

20 MR. TAKARA: That was my understanding from what I was
21 explained or told by some of our staff.

22 MR. BURIL: That's what I just read in Alan's letter.
23 It says those in the operable unit --

24 MS. GATES: Right.

25 MR. BURIL: -- must fulfill full requirements of 97-005.

1 MR. ZUROMSKI: And since the Sunset wells are not in the
2 operable unit, they don't have to --

3 MR. SORSHER: Well, as I said, they are already wells
4 that have permits. They are already approved sources.

5 So are you trying to say, well, if they can turn
6 these on temporarily without the 97-005, why do we need to do
7 the 97-005 for the Arroyo --

8 MR. ZUROMSKI: No, not for Arroyo and 52. I am talking
9 about Ventura and Sunset. We understand Arroyo and 52 --

10 MR. SORSHER: Yeah. Again, actually, what happened
11 really actually falls in line with what we have in the
12 letter. This is kind of a historic letter too because I
13 think it was the first one that I know of that put any
14 interpretation of 97-005 down on paper.

15 MR. BURIL: That's where I saw that --

16 MR. SORSHER: But, you know, we said with regard to your
17 four Monk Hill basin wells, we recommend that the 97-005
18 document be largely focused on the Arroyo well and Well 52.
19 If these wells will be extracting the more contaminated water
20 and will be normally -- normally being treated for VOCs and
21 perchlorate.

22 However, in order to provide a complete description
23 of this system operation and remedial action, the document,
24 which will be subject to public review, should include a
25 discussion of Ventura and Windsor Southern wells, the

1 concentrations, operations, and proposed VOC removal and
2 blending operation at the Windsor reservoir.

3 So basically they were doing some blending at the
4 Windsor reservoir already, and we said here also that you
5 don't need a 97-005 to do that.

6 MR. RIPPERDA: I guess an inverse of your question would
7 be they could have just as easily said in your 97-005 public
8 documentation to at least mention the Sunset reservoir wells
9 as being downgradient and possibly at the lower level.

10 MR. SORSHER: That's basically what we're saying.

11 MR. RIPPERDA: I though he was asking Sunset --

12 MR. ZUROMSKI: I am just trying to see what the
13 distinction is between the Sunset and --

14 MR. RIPPERDA: I was saying you could have mentioned
15 Sunset in there.

16 MR. SORSHER: Yeah. I thought -- okay. I thought that
17 the two, the Ventura and Windsor -- okay. Those are by the
18 Sunset.

19 MR. TAKARA: No.

20 MR. TAKARA: Those are Monk Hill.

21 MR. ZUROMSKI: Actually, you know what. We should have
22 a bigger map.

23 MR. TAKARA: We can draw a map right here.

24 MR. BURIL: That one might show it.

25 MS. GATES: That's close enough.

1 MR. ZUROMSKI: This is what we refer to. These are the
2 Monk Hill --

3 MR. SORSHER: I guess --

4 MR. ZUROMSKI: 52 -- and also Ventura and Windsor.

5 These are what we call the Monk Hill.

6 What we are talking about is Gary's wells that --
7 Sunset wells, which are about two miles off downgradient down
8 here, and those are the ones we are trying to see what the
9 distinction was being made between --

10 MR. SORSHER: Further away from the problem area.

11 MS. GATES: Source.

12 MR. SORSHER: Yeah.

13 MR. TAKARA: I know where Richard is going. But I think
14 one of the problems logistically for Water and Power, turning
15 on the Ventura and Windsor without any type of blending --
16 I'm sorry, without any type of treatment for blending is that
17 we have no means right now delivering Met water to that
18 reservoir. We blend out of that reservoir at a different
19 location, at a higher elevation.

20 That reservoir, Windsor reservoir, is served 100
21 percent with the Monk Hill well. That is why as of January
22 18, 2002, that reservoir has been sitting idle and empty.

23 MR. ZUROMSKI: Because you couldn't blend that with --

24 MR. TAKARA: Right now we don't have the means of doing
25 that, we blend further up at a higher pressure zone. And the

1 water is being used somewhat for distribution between the two
2 points, serving our customers.

3 MR. BURIL: I would like to clarify one issue that I
4 have in my own mind, for my own edification and anything
5 else.

6 The way I am hearing what your memo is saying here
7 is that if Pasadena had the ability to blend with Ventura and
8 Windsor, they would not need to go through the 97-005 process
9 as it currently stands. Is that correct?

10 MR. SORSHER: For the two Southern wells?

11 MR. BURIL: Correct.

12 MR. SORSHER: Yeah.

13 MR. BURIL: Okay. Then, in that line, then, if they
14 wanted to reactivate all four wells with only two of them
15 receiving treatment, they need to address all four wells in
16 the 97-005 only so much as mentioning a full operation
17 consideration, all four wells, but not necessarily the
18 full blown 97-005 that would otherwise be required.

19 MR. ZUROMSKI: Right.

20 MR. BURIL: That's why I want to make sure I am
21 interpreting it correctly because that is contrary to what
22 Vera said at one point in a meeting. That's why I'm asking
23 the question for clarification.

24 MR. SORSHER: Right. And, you know, we got Gary's
25 letter, and we chewed that over and interpreted it and went

1 back and forth with Vera.

2 And, you know, the basic idea is if you have --
3 you know, basically you are looking at the water coming in to
4 the treatment or the system. And if you have already done a
5 good, recent, thorough 97-005 for some upgradient wells, and
6 you have downgradient wells, which are not really any new
7 contaminant sources, there is not any wild card thing going
8 on where it's basically the same water, maybe more dilute.

9 There is no point in doing a full-blown 97-005 for
10 the downgradient wells if you have a good, thorough,
11 recent -- actually, one of the paragraphs, it says a thorough,
12 recent 97-005 evaluation for another nearby upgradient well
13 in the same basin and aquifer subject to the same
14 contamination sources.

15 And there's no reason to expect that the proposed
16 well will experience higher contaminations. Then we can
17 waive it or abbreviate it, even, and, you know, it's just a
18 general principal, and each one is evaluated on a
19 case-by-case basis.

20 MR. ZUROMSKI: So, then, it seems like the draft
21 document we're going to submit to you, for the source water
22 assessment, does what the letter says. It is really -- it is
23 truly looking at Arroyo and 52 with some mention of the other
24 wells.

25 MR. SORSHER: Right.

1 MR. ZUROMSKI: But the true analysis is on Arroyo and
2 52.

3 MR. TAKARA: As a follow-up to Chuck's question is that
4 in this letter that we received from DHS, we also asked the
5 question that if there is a need to switch over from the two
6 wells, Arroyo and Well 52, and to treat Ventura and Windsor
7 well as a temporary measure, to continue the treatment
8 process, the reply from DHS is that they require a little
9 more -- well, I shouldn't say a little more. They require
10 more details in the technical report and the operation plan
11 as well as the 97-005.

12 So the question, I think, is going to be asked
13 eventually is what does more detailed means?

14 You have a full-blown 97-005. You have -- this is
15 what we are planning on doing, and there's a wide --

16 MR. SORSHER: Again --

17 MR. TAKARA: In between --

18 MR. SORSHER: -- you know, the normal permitting
19 process does not have a 97-005. It has got a one-page
20 application form, and then there is a technical report that
21 the applicant prepares. It has all the information and
22 operation of the well, or treatment, whatever it is.

23 Now, that's where you have your operational details
24 of how you may use these other two wells in this equipment.
25 Just as opposed to just mentioning it in the treatment

1 portion of the 97-005 document.

2 MR. TAKARA: Okay.

3 MR. ZAIDI: Can you briefly tell me what 97-005 is.

4 MR. SORSHER: Briefly --

5 MR. BURIL: Oh, Lord.

6 MR. POUND: We'll be here until four o'clock.

7 MR. SORSHER: I can give you a copy.

8 In 25 words or less, basically, it's a policy memo
9 that came out in November of 1997 from our headquarters to
10 give us guidance in evaluating sources, proposed sources of
11 drinking water, if there are impaired aquifer situations.
12 And it outlines a series of steps that should be prepared to
13 evaluate it -- logical decision.

14 MR. ZAIDI: Okay.

15 MR. ZUROMSKI: From our standpoint, what we are doing --
16 I'll tell you the process is that the EE/CA recommendation
17 is to extract the water, treat it and use it for public
18 supply, and it's that use for public supply that triggers
19 what Alan is talking about, the 97-005 process.

20 If we were to go to other processes, like
21 reinjection options or other alternative completely
22 different. Since we are choosing this option, we are going
23 in, helping the City put together the 97-005 process, and
24 that's kind of why we are doing this process, and that's why
25 we have the City involved.

1 So that's something that is not normal for a CERCLA
2 site, but it's the situation that we are in.

3 MR. BURIL: I am going to ask my other question. I may
4 be stoned for it later, but I seem to remember within 97-005
5 discussion about splitting of plant effluent for treatment.
6 In other words, if you have a total flow coming from a
7 portion of an aquifer, that you must treat the entire flow
8 from the aquifer and not split it for only partial treatment.

9 And it strikes me that what we are talking about
10 here could easily be misconstrued as partial treatment.
11 That's why I'm raising the issue because I would hate to see
12 us go down this path and then suddenly get tripped up.

13 MR. SORSHER: I don't think that -- I have to see where
14 that is.

15 MR. BURIL: Something to think about.

16 MR. SORSHER: I don't really think it actually says that
17 in so many words. Generally, because we wouldn't want you to
18 take some of the Well 52 or the Arroyo water and partially
19 treat that --

20 MR. BURIL: Uh-huh.

21 MR. SORSHER: -- and blend it. Everything that comes
22 out of those wells should be treated.

23 MR. BURIL: Uh-huh.

24 MR. SORSHER: But --

25 MR. ZUROMSKI: Is what you are saying, Chuck, maybe that

1 we would, if we were treating Arroyo and 52 and then not
2 treating the other two and blending it together; is that
3 what you are talking about?

4 MR. BURIL: Well, I am going back to the discussion that
5 we had with Vera at the last meeting I was present at in
6 Pasadena, and that was that -- my recollection was that she
7 was very adamant that all four wells must be treated.

8 MR. ZUROMSKI: And I think since that letter came out --

9 MR. BURIL: And it appears that the interpretation of
10 97-005 has changed significantly based upon the letter that
11 Alan is now talking about, and I wanted to be sure that there
12 isn't some kind of distinction being made between one part of
13 97-005 and another part.

14 And that's where I am leading to, just to be sure
15 that we don't get three quarters of the way down this road
16 and suddenly say, "Oh, wait, we have made a mistake. "

17 MR. TAKARA: Are you referring to Vera's comment about
18 blending is not a treatment?

19 MR. BURIL: No, no. Actually, I am recalling that she
20 said --

21 MR. TAKARA: There is --

22 MR. SORSHER: On page 4, under effective monitoring
23 treatment, there is a sentence here that says the entire flow
24 from the extremely impaired source must pass through the
25 complete treatment process or processes.

1 MR. BURIL: That's the one I am talking about.

2 MR. ZAIDI: I think it makes sense. Because if you have
3 a plume, and you have a well here, if that well has got its
4 own -- is getting all the contribution from the plume, that's
5 fine.

6 But the area which is outside the captured zone is
7 not being affected by it, is not being extracted, so wherever
8 you have the extraction well, the capture zone should have
9 all the contaminated water.

10 So probably that is what is meant here, that all
11 the flow should be -- should have been -- should be able to
12 be extracted from that well, what you have put down there for
13 extraction and treatment.

14 MR. SORSHER: Ideally that's correct. Although they do
15 say in the next sentence: Any water from other sources that
16 is available for blending prior to entry in the distribution
17 should be used to provide additional safety factor.

18 MR. BURIL: Right.

19 MR. SORSHER: So, you know, it is a matter of, do we
20 want to call those two Southern wells, you know, as impaired
21 as the Arroyo and the Well 52?

22 And I don't think -- again, I haven't looked at the
23 data in a long time, but I don't think they are nearly as
24 contaminated.

25 MR. ZUROMSKI: Well, actually, you know, that's why I

1 was asking the question earlier about the Sunset wells.

2 The levels -- the last time we took samples seemed
3 pretty close to what the Sunset wells were. That's why we
4 are trying to see maybe what that distinction was. It seems
5 like the letter clarifies as far as the treatment process
6 goes.

7 MR. SORSHER: Right. And I think that was the gist of
8 Gary's letter. You know, this doesn't talk about your other
9 two Sunset and the Windsor wells.

10 MR. TAKARA: That was way before that time.

11 MR. SORSHER: So anyway, I think we are good to go on
12 this.

13 MR. RIPPERDA: That was a good question, because
14 certainly the way its worded in the policy, it's open to
15 interpretation.

16 MR. BURIL: Uh-huh.

17 MR. RIPPERDA: Say, if you are treating a well, you have
18 to treat everything from that well. You can't split that
19 well stream.

20 Or you can take a hydrogeologic interpretation and
21 say if you are within the plume, everything within the plume
22 must be treated.

23 MR. SORSHER: Right.

24 MR. RIPPERDA: So you are looking more at the more
25 highly impacted well.

1 MR. SORSHER: Right.

2 MR. RIPPERDA: And that well must be entirely treated.
3 You are allowing it to be blended with less impacted portions
4 of the same plume.

5 MR. SORSHER: Right. Again, we are looking at each one
6 of these on a case-by-case basis. That's the way this is
7 written. I mean, there is a lot of --

8 MR. RIPPERDA: We certainly appreciate your approach
9 here. It is the common sense one, and it is the one that
10 actually --

11 MR. BURIL: It makes things move forward rapidly.

12 MR. TAKARA: Flexibility.

13 MR. SORSHER: Mainly, Gary was asking about flexibility
14 on the treatment and how to handle that. That's a good
15 point.

16 MR. ZUROMSKI: This seems to lead, actually, into
17 another question. This actually goes back to the EE/CA to
18 some extent and how all of this fits together with having
19 blending from the Arroyo and 52 as well as from Ventura and
20 Windsor.

21 We were going back before we finalized the EE/CA,
22 and we are reading your comments that GeoSyntec prepared, and
23 actually Mark and Richard and Mohammad hadn't seen that
24 comment. And I thought maybe you could help us clarify
25 today, the comment regarding the difference between -- we had

1 all worked together on proposing the 3800 GPM system, but
2 that might exceed your water rights in the basin and how that
3 worked.

4 Could you provide a clarification on that question.

5 MR. TAKARA: Sure. The issue at hand was if the well
6 head treatment is designed to deal with flows of about
7 approximately 3800 GPM, and the ideal is to run the well head
8 treatment all year round, it is possible, during the dry
years,
9 for example, like the past two, three years, where we had
10 extremely low spreading, that the total pumping would exceed
11 our adjudicated ground water rights, unless we started to tap
12 into long-term storage, which is designed primarily as an
13 insurance policy.

14 In other words, if you take 3800 GPM and multiply
15 it by 12 months out of a year, that probably ends up
16 something like around 6000 acre feet. Well, we are
17 guaranteed 4,464 acre feet --

18 MR. ROBLES: What is that number?

19 MR. TAKARA: 4,464.

20 Anything above that would mean that we would have
21 to either take from long-term storage or supplement it from
22 our spreading credits.

23 As an example, last year we received approximately
24 500 acre feet in the Monk Hill area, spreading. Gives us
25 only about 5,000 pumping rights. Anything beyond 5,000, we

1 would have to tap into long-term storage, which we have
2 fixed amounts, or we shut down the plant.

3 Or the other option, we pump more than we are
4 allowed to and be sued.

5 MR. BURIL: Or buy the additional from someone else.

6 MR. TAKARA: Buy from somebody else, but there's not too
7 many people up there with large storage like what we have.
8 It is all small producers up there.

9 MR. ZUROMSKI: So I guess our question is, you know,
10 going back to the EE/CA and the actual design, when you and,
11 I guess, probably was Dave during the summer sat down, and we
12 originally had proposed 3200 GPM, and your guys had proposed
13 around 3800 GPM, was there -- I guess did we not think about
14 what the consequences of that were at that time and how we
15 need to rethink that number, maybe?

16 MR. TAKARA: Well, the primary problem we had then was
17 that we were always dealing -- I was always dealing with
18 large spreading issues, and that number was just fixated in
19 my head. It wasn't until later when we sat down, we said --
20 we ran the numbers, and we thought about it, and said, you
21 know what, they want to run these wells 11 months out of the
22 year, which we normally do, is this going to a problem, and
23 then we ran the numbers, oh, boy, and it just fell upon a bad
24 year of spreading. It occurred to us it might be a problem
25 now.

1 MR. RIPPERDA: But you still want the system designed
2 for 3800 to handle the times when you do need the flow rate --

3 MR. TAKARA: Oh, yeah.

4 MR. RIPPERDA: -- but then have the documentation
5 written so that it's limited to 4400--

6 MR. TAKARA: They have to allow the flexibility to
7 throttle down to a number that would meet both our or meet at
8 least the primary issue is to meet the treatment goals as well
9 as to meet our right on pumping rights.

10 MR. ROBLES: I thought that that limit was 3200. I know
11 we designed it at 3200 is the minimum optimum, to contain the
12 plume, which is a major objective of our EE/CA.

13 Two 3800 because the plant is designed at 4,000, so
14 we want to have 10 percent buffer. So that was our range, 32
15 to 38, but it sounds like you are saying that even at 32, we
16 may have a problem with your water rights.

17 MR. RIPPERDA: Really close.

18 MR. BURIL: It's close. It's very close.

19 MR. TAKARA: Under the modeling, is it ideal that --
20 well, I know ideally you want to run it 12 months of the
21 year. But is there any such thing as a period of what is
22 acceptable to shut down? I mean, nine months out of the
23 year --

24 MR. ROBLES: We designed it for eleven months with one
25 month down for maintenance, and the main goal is to contain

1 the plume as much as possible. That's all we wanted to know.

2 So is there some way that you could like look at
3 3200 and see how close we're going to be, whether we need to
4 run it just nine months --

5 MS. GATES: I think that's something that we will
6 probably look at, and we will run -- crunch those numbers and
7 see what might be optimum, you know, to stay within that
8 level of the 4400, 64, and then give -- like you said, it's
9 designed for 4,000. So on times when we can go more, then
10 we'll go more. And on times when we need to scale back, we
11 will scale back.

12 But we are asking that mostly because we need to
13 make sure that is clear in the memorandum and whatnot so
14 that, you know, we are not expecting to run it at that high
15 level the whole time and you tell us no.

16 MR. ROBLES: Is it possible to get relief from that, for
17 the Raymond basin because this is a CERCLA action?

18 MR. RIPPERDA: Who --

19 MR. TAKARA: That is going to be tough.

20 MR. RIPPERDA: I don't even think we need to go there.
21 The 3200 times 11 months is going to be awfully close to
22 4400, maybe just a touch over.

23 So I think we can just -- the containment model
24 can't be so tight that you can't run it at whatever, 3150 or
25 something or 3050 or something --

1 MR. ZUROMSKI: Modeling.

2 MR. RIPPERDA: Yeah.

3 MR. BURIL: And I think that a little bit of inaccuracy
4 or lack of precision in the modeling versus real life, if you
5 stop and think about this issue on a conceptual basis, for
6 decades, Pasadena operated their plant and their wells
7 exactly as they always wanted to. And if we look at the
8 monitoring data, that was sufficient to arrest the
9 contaminant migration. It didn't go anywhere beyond these
10 wells.

11 And so even if you are a little off in certain
12 areas, even if you do need to have a certain restriction in
13 terms of length of time pumping, 10 months instead of 11 or
14 whatever the numbers might work out to be, keep in mind
15 conceptually that it still works.

16 MR. ZUROMSKI: I guess the key issue is just making sure
17 that it's understood that as long as we can get up to that,
18 in other words, we can stay close to that number on a
19 consistent basis, whether it's 10 or 11 months out of a year,
20 and we just -- that's what we want to make sure that we are
21 doing that, and that's going to be satisfactory --

22 MR. TAKARA: I mean, of course, you know, the amount of
23 water that we are permitted to pump because of adjudication
24 and any other additional spreading, that is one of our -- how
25 do you say it? -- rules that we have to follow here. But

1 at the same time, the City, you know, we want to pump. I
2 mean, that's our goal is to pump out of that basin, pumping
3 out a higher basin. So we understand exactly where you are
4 coming from, you know, target goal be 10 months, 11 months,
5 3200 or 3800 --

6 MR. ZUROMSKI: Whatever it takes to get that water right
7 out of the ground --

8 MR. TAKARA: And if we have enough water we want to pump
9 4,000, we'll pump --

10 MR. ROBLES: So we don't see -- right now we don't see a
11 problem with adjudication issue at 3200?

12 MR. TAKARA: I don't know what 3200 --

13 MS. GATES: We will work it out to figure out the
14 optimum.

15 MR. FIELDS: At 11 months, it comes out to 49-, I think,
16 47-, 4900 acre feet.

17 MR. TAKARA: That shouldn't be too bad. That's only
18 two, three hundred --

19 MS. GATES: But we might choose a range and start with
20 the bottom level, which is 4400, and then saying optimum
21 would be higher, just to make sure --

22 MR. TAKARA: So that means that 11 months out of the
23 year -

24 MR. FIELDS: Yeah.

25 MR. TAKARA: -- times --

1 MR. BURIL: I think one of the things that you might
2 consider doing, too, is in the course of the analysis that
3 you want to run, you know, what is the best level?

4 Because now you get some of the information from
5 Pasadena on historical levels, pumping and usage, because
6 historically, prior to, you know, recent years, the pumping
7 scheme that they utilized was sufficient to arrest major
8 migration of the plume.

9 So if you can establish some kind of a range based
10 on that information, as well as other information, I think
11 you have a very good degree of confidence that you are going
12 to be okay in terms of containment.

13 MR. FIELDS: I have another question. You said the
14 current spreading credit is about 500 acre feet.

15 MR. TAKARA: That is what we got last year.

16 MR. FIELDS: And that' a dry year.

17 MR. TAKARA: Yes. That's on a dry --

18 MR. FIELDS: What would be -- do you have a range on
19 maybe a typical year or a wet year, what kind of spreading
20 credit acre --

21 MR. TAKARA: 21-, 2500. At times we did 6000.

22 MR. FIELDS: Acre feet?

23 MR. TAKARA: Yeah.

24 MR. FIELDS: 4464 --

25 MR. BURIL: That was in '96, wasn't it?

1 MR. TAKARA: Yeah. When we had some good years, we took
2 it.

3 MR. FIELDS: You had 4,000 acre field of credit, worth
4 7- or 6000, not total --

5 MR. TAKARA: Every year -- every year, we are allocated
6 4464 in adjudication. You can take that as a guarantee on
7 this.

8 Any spreading that we do on top of that, it adds to
9 our pumping rights. For example, last year was a very dry
10 year. Let's see. Last year -- or maybe perhaps the
11 preceding year was dry. So we got the pumping rights the
12 following year. So last year we were given 500 acre feet out
13 of Monk Hill.

14 So you could say that we could only pumped 4,900,
15 or 5,000, but on good years, we had something in 5-, 6000,
16 6,000 acre feet plus the four. So that would have given us
17 like 9-, 10,000 acre feet.

18 And what we do is, anything that we can pump, we
19 will just buy the storage and keep it there for some later
20 date.

21 MR. FIELDS: That is your long-term storage --

22 MR. TAKARA: Long-term storage, but we maxed out
23 long-term storage. They give you certain space to use, and
24 if you use up that space, then you have to go out to your
25 other parties and purchase their space. But up in that area,

1 there's not too many parties with space. So we run into that
2 problem.

3 MR. SORSHER: Gary, maybe this is a silly question, but
4 I'm not that familiar with how your system operates and the
5 constraints.

6 Is it possible also to throttle back some of your
7 other wells to the west -- to the east if they need to pump
8 more on these wells?

9 MR. TAKARA: That is something that we will have to look
10 at.

11 Now, there's this flexibility, with the judgment,
12 which is the -- the judgment is sort of like the rule book
13 for all the 16, 17 parties up there. We have these three
14 basins, these three aquifers, Monk Hill, Pasadena Sub, and
15 Santa Anita sub. We have wells operating at Monk Hill and
16 wells operating at the sub area.

17 They allow you to pump one basin, one aquifer out
18 of different aquifers. So, in other words, if Monk Hill is
19 down, we will pump as much as we can out of the subarea. So
20 any water that we transfer down, we will pump that.

21 So to answer your question, more than likely, we
22 could probably do the reverse. We may have to throttle down
23 or maybe do another well in the sub-area and make up the
24 difference in the Monk Hill.

25 When we're dealing with numbers like 4-, 500 acre

1 feet, that's not bad. I mean, maybe -- I know I am looking
2 at short term, that's not bad. Maybe in the long term that
3 might be a problem, but I am hoping in the long term, we'll
4 get those good years of spreading, and that will give us the
5 6,000, and that will take care of the problem. With
6 precipitation, anything is possible.

7 That is one of the factors that we are going back
8 and forth with Dave and -- who was it? -- Ken, and that was a
9 big problem.

10 We had wet -- very wet years and very dry years.
11 So in those areas where we are talking about 2-, 300, 400
12 acre feet, I am sure we can do something to accommodate that
13 balance.

14 But we just want to make note of it in the EE/CA
15 that that is something to be aware of, and that's something
16 that I think maybe Kimberly and I and Dave, that we have look
17 more carefully at it, and Chuck said to come up with a more
18 thorough operational goal as to what we want to run. And
19 we'll try to work with the solution to figure out what we
20 need to do in the other basins.

21 MR. ZUROMSKI: It's a lot clearer now.

22 MR. ROBLES: I don't want to -- I agree with Mark. I
23 don't want to have an issue with the adjudication. That is
24 another layer that it creates. I don't want to trigger that
25 issue.

1 MR. TAKARA: Right. Right.

2 MR. ROBLES: That's why I am asking if we can make sure
3 that we don't have to put the EE/CA in and not to worry about
4 that, that we are always within compliance of the
5 adjudication.

6 MR. ZUROMSKI: That is really, I think, the information
7 we are looking for. I think that will help us finalize the
8 EE/CA now and move forward.

9 MS. GATES: Do you have any further questions?

10 MR. ZUROMSKI: I don't.

11 MR. ROBLES: No.

12 MS. GATES: You are ready to move on to the next
13 section?

14 MR. TAKARA: Actually have a couple --

15 MS. GATES: All right. Go ahead.

16 MR. TAKARA: Two quick questions on EE/CA, on the final
17 EE/CA. I know one time there were discussions about possibly
18 using Arroyo well in lieu of using a new well.

19 Was that ever finalized?

20 MR. ZUROMSKI: I think it's going to depend on what we
21 find when we go out into the field and look at the Arroyo
22 well, until we evaluate what condition the Arroyo well is in.

23 We can decide whether we can use it at all or if we
24 can use it temporarily until we figure out where it's, you
25 know, stratified so that we can then build a new well that

1 targets certain area.

2 I don't think either way in the EE/CA -- it matters
3 because the well is going to be right next to each other.

4 So I think the key would be what condition is the
5 Arroyo well in. If we can get data from the Arroyo well that
6 we have never been able to get before, kind of like we're
7 doing with our other pilot test, see if we can find out where
8 the chemicals are so that when we build the new well we can
9 target the screens rather than just putting huge screens
10 on the wells.

11 So I kind of -- I think the decision hasn't --
12 doesn't necessarily have to be in EE/CA, and I think the
13 flexibility in EE/CA lets us do that.

14 MR. TAKARA: The only reason why I am asking that is
15 without having a strong background in environmental sciences
16 or law, or anything like that, the Hahamonga is moving
17 forward on their master plan and their Master EIR, and that
18 itself, if that area is not being, how would you say,
19 documented in this environmental report on the Master EIR,
20 which I think is going to be recommended to counsel very
21 shortly, I wasn't sure if this project is running in parallel
22 without having anything -- without any environmental
23 documents being done or, I should say, being public that this
24 may be a problem.

25 And the reason why I'm saying this is because in

1 the MEIR or, I should say, in the Hahamonga master plan, they
2 had identified that the Arroyo well possibly will be used as
3 the extraction well, and anywhere outside of that boundary,
4 within a reasonable area of that boundary, and from what they
5 told me, it's a very small amount that they are giving us the
6 flexibility.

7 It could be -- it may be a problem with their
8 document, or even if their document is adopted and, you know,
9 adopted by the State or Federal Government, whoever adopts
10 it, it might throw this into a curve ball as where you are
11 actually planning on putting that replacement well.

12 So I think that needs to be -- try to finalize as
13 quickly as possible and also coordinate it with the Hahamonga
14 MEIR to prevent any problems.

15 MR. ZOROMSKI: I think we have always taken that into
16 account since we first started meeting with you guys several
17 years ago. And wherever that new well will go the area that
18 would be allowed by the master plan. I think we have taken
19 that into account, at least the master plan as it existed
20 when we put the EE/CA together.

21 Maybe we need to see how much it may have changed,
22 if that would change our plan. Maybe we will at least
23 revisit it just to make sure that our plans still fit within
24 the Master EIR.

25 MR. TAKARA: Because I think the last time I met with --

1 was it with you, Dave, that I took you up to Arroyo well
2 area --

3 MR. ZUROMSKI: It was us back about a year and a half
4 ago --

5 MR. TAKARA: Okay.

6 MR. ZUROMSKI: -- where we all walked all the different
7 areas --

8 MR. TAKARA: Right. And from what John Cox, with the
9 Public Works, he had informed me regarding the location,
10 it sounded like it's extremely within very close proximity
11 to the Arroyo well.

12 MS. GATES: Uh-huh.

13 MR. TAKARA: And I remember you were talking about
14 moving it about 100 feet south of that -- 50 feet south of
15 that. And that might be outside of what Public Works is
16 thinking, so it might be a problem. I was just wondering ---
17 yeah, should we look in as early as possible.

18 MR. RIPPERDA: So your treatment plant and everything
19 else was sized based on the Hahamonga EIR --

20 MR. ZUROMSKI: It's going to be in the Windsor
21 reservoir --

22 MS. GATES: The Windsor reservoir.

23 MR. ZUROMSKI: Which is outside the --

24 MS. GATES: But it is sized to fit within that so --

25 MR. TAKARA: The Windsor.

1 MS. GATES: Right.

2 MR. TAKARA: The EE/CA now reflects Windsor?

3 MS. GATES: Yes.

4 MR. TAKARA: Okay. Good.

5 MR. BURIL: Yeah, the Windsor -- that site.

6 MR. TAKARA: I remember the EE/CA. I think it was
7 stating that, you know, adjacent to the VOC plant.

8 MS. GATES: Oh, no. Windsor reservoir.

9 MR. TAKARA: Okay. Good.

10 MR. SORSHER: Just to mention, also, for your permit
11 amendment, you know, you are going to have EE/CA document.
12 So if there is an EIR in this area that you may be able to
13 use a lot of that information --

14 MR. TAKARA: Definitely. Definitely.

15 MR. ROBLES: Next subject.

16 MR. RIPPERDA: Does this mean we are moving on to other
17 items? Are we done with this?

18 MS. GATES: Is that right?

19 MR. RIPPERDA: I had another question about Operable
20 Unit 3.

21 MS. GATES: Great. Go ahead.

22 MR. RIPPERDA: Just want to -- well, I guess thank NASA
23 Headquarters and the City of Pasadena for working out
24 whatever differences you had enough so that I can move
25 forward. So thanks.

1 And what's the status -- certainly, you know, a
2 major milestone before any work can get done is the actual
3 memorandum or understanding or agreement or whatever you are
4 going to call it between NASA and the City. So what is the
5 timetable for that, and is that progressing?

6 MR. SCHOPPET: Yes, that is progressing. We have a
7 correspondence between NASA Headquarters and the City, and
8 then negotiations will continue.

9 MR. ZUROMSKI: The letter we sent out sometime, either
10 earlier this week or late last week, the first letter from
11 after the meeting that NASA Headquarters and the City of
12 Pasadena had, so that's what the City had requested, a letter
13 from NASA Headquarters.

14 Now it is back at the City to continue the line of
15 communication.

16 MR. TAKARA: The City received a letter from NASA. I
17 think it was dated March 18, somewhere around March 18.

18 What we're planning on doing with that information
19 is we'll be going to our Council in a closed session to brief
20 them as to what has occurred recently. Since the last time
21 we talked, we spoke to Council members, which was six, seven,
22 nine months ago, so it's been a while. So we will bring them
23 up to date, and based on their recommendations or advice to
24 us, we will take that and move forward.

25 MR. ROBLES: I think that if both sides, because of the

1 letter and the meeting, which was very good, they are now
2 figuring out what they want to do and how they want to work
3 together and who is going to be on that, but we are working
4 on it in terms of good progress.

5 When are you going to do the briefing to the City?

6 MR. TAKARA: We're hoping to do it on April 7th, next
7 Monday. That is our goal. We are waiting for our attorney
8 to tell us if that is a problem.

9 MR. ROBLES: So April 7th, you are going to brief the
10 City Council on the status, and then they will know where to
11 proceed from there --

12 MR. TAKARA: Right.

13 MR. ROBLES: -- to work with NASA.

14 MR. BURIL: And, again, Gary, this was a closed session?

15 MR. TAKARA: Closed session.

16 MS. GATES: Are there any additional questions for OU-3?

17 All right. Then I think we'll move on to other
18 items.

19 Does anybody else have any other issues they would
20 like to bring up or further discussions they would like to
21 have?

22 MS. GATES: This is an easy crowd.

23 MR. TAKARA: I forgot to mention this.

24 During the process of reviewing a lot of these
25 documents, for example, the EE/CA documents, or any other

1 scientific study -- research -- excuse me, scientific data,
2 mentions to -- references to other documents as held at the
3 repository.

4 Was there any means of having access to the online
5 repository from offsite the library --

6 MR. ZUROMSKI: I think this is something that we have
7 considered in the past, and I don't think it is something
8 that we can't revisit.

9 Right now, how the process works is that we have
10 all of the libraries online with an electronic
11 version -- protected website. That is really useful at the
12 libraries.

13 And one idea that we have thrown about in the past
14 was to maybe make maybe a more open website, not necessarily
15 that would be the full portal into the administrative record,
16 but to display the most recent documents for public meeting
17 purpose and public outreach purposes.

18 And I think that right now we are discussing -- the
19 Navy is discussing those options with NASA, and NASA
20 actually has hired a group to assist with that type of
21 analysis.

22 So I think that probably this is now being proposed
23 again with the new NASA Headquarters contractor, along with
24 the Navy. I think that may be there could be some --
25 especially with the upcoming public meeting and the new, you

1 know, public outreach that we're going to need, this might be
2 a more timely period to put something like this together.

3 MR. RIPPERDA: Gary's question is a good, broad
4 question, but more specifically he probably wants for him and
5 his consultants access to the major technical documents
6 rather than talk about the grand scope of a public database.
7 Can you just burn a CD with not the full administration
8 records, but all the RI, SI feasibility studies, the major
9 technical documents, and give them to the City?

10 MR. SCHOPPET: I don't see a problem with that, access to
11 that.

12 MR. ROBLES: Can we give them -- can we give them --

13 MR. ZUROMSKI: I think, actually, I have a CD with a lot
14 of those documents on them from the original administrative
15 records. I would just have to see which documents. I mean,
16 I don't even know --

17 MR. ROBLES: What I was looking at is I was talking with
18 Mark was the fact that if we could give Gary a limited access
19 for a short time so that his group can look at it, what he
20 needs to see it right now, so that when he and his group can
21 look at it --

22 MR. ZUROMSKI: Uh-huh.

23 MR. ROBLES: -- give a password for 30, 60 days.

24 MR. ZUROMSKI: We can do that any time.

25 MR. ROBLES: We don't see a problem with it.

1 If you can work with Gary on that, let him have an
2 access, 30, 60 days -- is that cool? So that way you can
3 look at the documents and give limited access for a short
4 time. I think that is cool.

5 MR. TAKARA: I think more than just the 60 days. I
6 think it would be more when we need access, we could call in
7 to that, because documents do float back and forth --

8 MR. ROBLES: That's one of the things that we are
9 working on with the contractor that Richard was talking about
10 is we are trying to develop a scheme of how to allow more
11 access to the public and to the stakeholders.

12 One of the things that we are trying to work
13 internally is to do that, but for your immediate concern
14 right now, we can give you that code so that you can look --
15 we want to -- we are going to address that configuration. On
16 a broader scale, we are working on it, but on a right now
17 scale, you can get access to it and work on those documents.

18 MR. SORSHER: You know, when I dealt with Glendale OU on
19 this, actually for public use, they actually used the City's
20 website.

21 MR. ROBLES: Uh-huh.

22 MR. SORSHER: And also, when I needed some documents
23 that -- had to get my feet wet a little bit, I was able to
24 get PDF files through the city they e-mailed PDF files
25 workable enough.

1 MR. RIPPERDA: That's what I said, burn a CD or e-mail,
2 the major technical documents so that he doesn't have them on
3 his hard drive rather than having to go through the Internet.

4 MR. TAKARA: Well, I mean, if it is going to be as easy
5 as calling up, say, Richard and Kimberly, allowing me access
6 with a code where I am allowed to download and burn my own
7 CD, that is just as good because, I mean, Battelle and
8 Richard, they have been forwarding me CDs when I have been
9 asking for them.

10 But it would be nice at that moment when we are
11 flipping through a document for my consultants, saying well,
12 this thing is referring to some document done two, three
13 years ago. It takes a while to contact and get the burn, and
14 here is a code, temporary code, go ahead, give you a 20-day
15 window to download whatever you need to do as long as I can
16 download and burn it, that is just as good.

17 MR. ROBLES: That is the admin record is supposed to be
18 for public access. There is no problem with copying. It is
19 just getting the access. If you are having a problem, we can
20 give you limited access for 30, 60 days, so you can take the
21 time to burn it down as you need it.

22 MR. ZUROMSKI: Maybe we should start off with that trial
23 period while we are still figuring out what we're going to
24 do, and maybe what I'll do is I'll e-mail you a password that
25 allows for the next 30 to 60 days. By that point in time, we

1 will have our decisions finalized on how the whole site will
2 work. But during the whole time, you have regular access to
3 the documents.

4 MR. TAKARA: Right.

5 MR. ZUROMSKI: That is okay with --

6 MR. SCHOPPET: Yes, it is.

7 MS. GATES: Are there any other items for discussion?

8 How about we set -- do you want to set the next
9 telecon, at least for right now?

10 I think we need to go back and talk to NASA to see
11 how we want to run the next meetings and when we have time to
12 do the next meetings. Work with your schedule, as well as
13 Brian, who is going to be actually taking over Richard's slot
14 so --

15 MR. ROBLES: At least we should set the telecon --

16 MS. GATES: Yeah. And then by then, we should have a
17 better idea of people's schedules --

18 MR. ROBLES: The second Thursday of May is the 8th.

19 No. Thursdays are no good.

20 MR. ZUROMSKI: The first Thursday works.

21 MR. GEBERT: The second Thursday is when we have our
22 meeting --

23 MR. ROBLES: The first Thursday is the 1st of May. Is
24 that okay for a telecon?

25 Hearing no objections.

1 MR. RIPPERDA: Yes.

2 MR. BURIL: I hear no "May Days" being called.

3 MR. ROBLES: So we will call a telecon for the 1st of
4 May, and we will e-mail you the call-in number, and we will
5 have it at nine o'clock.

6 Is that okay with everybody? Nine o'clock Pacific
7 Coast time? Okay.

8 And then we can go from there. At least we can set
9 that up and set --

10 MS. GATES: When we get back to Brian and Mark and
11 everybody --

12 MR. ROBLES: Set up our next RPM meeting. Okay.

13 If these RPMs please review the documents that we
14 send you, and if you need an extension, please ask.

15 MR. ZUROMSKI: Or if you want to get it done faster, you
16 don't have to ask.

17 MR. ROBLES: Okay. I don't have anything else. Any
18 other items?

19 MR. RIPPERDA: So the only two documents that are coming
20 immediately are the work plan and the action memo?

21 MS. GATES: Uh-huh.

22 MR. ZUROMSKI: The work plan even faster.

23 MR. RIPPERDA: And a request for the action memo.

24 Can you put EPA on the action memo as a signatory?
25 You don't have to, but our headquarters gets a little

1 bean at Congress if they have to sign it.

2 MR. ROBLES: Hey, we want you to look good.

3 We want you to look good. Beans for everybody.

4 MR. BURIL: We want you to be as full of beans as we
5 can.

6 MS. GATES: Not if you are going to be in my room.

7 MR. ROBLES: I have done that before. We will ask our
8 headquarters team, but I don't see a problem as a co-signer
9 on that.

10 That is a question. Did the other RPMs have an
11 issue with that? We want to stand up before the public
12 showing a unified front with the Raymond Basin as the City, as
13 we present any action on the removal. And we want to show
14 that, so it may be a good way to show that.

15 MS. GATES: I think we should bring it back to our team
16 and discuss it with NASA and then --

17 MR. ROBLES: The Navy wants to sign --

18 MR. TAKARA: And we can bring that back up at the next
19 conference call.

20 MR. ROBLES: Okay. We will bring that up.

21 MR. RIPPERDA: RODs are signed by everybody. Action
22 memos used to be signed by everybody, but the law doesn't
23 require it, so I need to move it along faster, just start
24 moving to a current, but if it does kind of look a little
25 better in the administration record --

1 MR. ZUROMSKI: I think that's something. We will bring
2 that back to the NASA team, and we will let you know. We'll
3 talk about it, but that sounds like at least that's a good
4 plan.

5 MR. ROBLES: Suggest --

6 MR. ZUROMSKI: And public meeting --

7 MS. GATES: We will have to bring that up at the next
8 conference call. But that's something we are definitely
9 working on to move ahead as soon as possible.

10 MR. RIPPERDA: That's something I want to stress to
11 you that we have had way fewer public meetings, but several
12 orders of magnitude, fewer public meetings at this site
13 than almost any other Superfund site, certainly a federal
14 facility Superfund site so we would love to see more community
15 involvement --

16 MR. SORSHER: Is there any opposition?

17 MR. ROBLES: No.

18 MR. SORSHER: Or controversy with the public.

19 MR. ROBLES: No.

20 MR. BURIL: Not from the public at large, no.

21 MS. GATES: Not that we are aware of.

22 MR. TAKARA: How many public meetings are you looking
23 at? Two --

24 MR. ZUROMSKI: We probably have at least one or
26 two, like one or two day meetings, but over two days,

1 now, and then another one for the 97-005 process, when it's
2 complete, and that's springtime.

3 And then in between that is kind of NASA's coming
4 up with formulations of overall community relations and how
5 maybe they are, like Mark was saying -- would you even have
6 anymore than that?

7 MR. ROBLES: It's being discussed, Mark, and we're
8 looking at it, and one of the things that the headquarters
9 team has recommended is to look at more public meetings, so
10 yes, in --

11 MR. ZUROMSKI: We are guaranteeing the two right now --
12 the one for the 97-005.

13 MR. SORSHER: The 97-005 meeting could come -- normally,
14 the way we would do it, it is really the meeting for the
15 permit, the hearing for the permit. And then the 97-005 is
16 part of the documentation supporting the permit application.
17 So that would be down the road. Depending on how fast all
18 these things proceed together.

19 MR. RIPPERDA: As you pointed out in your comment
20 letter, we all have this problem of saying 97-005 when we
21 should be saying the permit. So we will say the 97-005
22 meeting, and you will say no, that is actually the permit
23 public meeting --

24 MR. SORSHER: Public hearing --

25 MR. RIPPERDA: We should all say the permit, for which

1 the 97-005 process is, whatever.

2 MR. SORSHER: Spoken like a true regulator.

3 MR. TAKARA: The reason why I'm asking, while I am
4 thinking about it in hindsight, within the City, the City
5 worked hard to go through in its outreach, although Council
6 has authority overall public works, City of Pasadena Works,
7 and under CERCLA, you may have a minimum of what is required.
8 The City may require additional outreach just because of its
9 highly sensitive environmental area --

10 MR. ZUROMSKI: We are working to, hopefully, develop a
11 plan that will work for all of us.

12 MR. TAKARA: That is something I wouldn't be surprised
13 if that question is asked, why there are not more. I am
14 hearing from my constituents they may have a problem with
15 this treatment at Windsor because of its size and nature, why
16 are they hearing about it in the newspapers, so it is
17 important. We can't satisfy everyone. That's understood--

18 MR. SORSHER: If there is any oppositional problem, the
19 earlier you find out about it, the better off you are.

20 MR. TAKARA: Test the waters.

21 MR. ROBLES: Okay.

22 MS. GATES: I think we are adjourned.

23 MR. ROBLES: So the meeting will be called and adjourned
24 at 12:56. Thank you very much.

25 (At 12:56 P.M. the proceedings were adjourned.)

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

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4 I, ANN BONNETTE-SMITH, C.S.R. No. 6108, do hereby
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15 IN WITNESS WHEREOF, I have hereunto subscribed my name
16 this _____ day of _____, 2002.

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