

EVIDENTIARY HEARING
BEFORE THE
CALIFORNIA ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:)
)
Application for Certification) Docket No. 08-AFC-13
for the Calico Solar Project)
(formerly SES Solar 1))
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HAMPTON INN & SUITES BARSTOW
2710 LENWOOD ROAD
BARSTOW, CALIFORNIA

FRIDAY, AUGUST 6, 2010
9:15 A.M.

DOCKET	
08-AFC-13	
DATE	<u>AUG 06 2010</u>
RECD.	<u>AUG 12 2010</u>

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3 Paul Kramer

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6 Jeffrey Byron, Associate Member (via telephone)

7 Lorraine White, Advisor to Commissioner Eggert

8 Kristy Chew, Advisor to Commissioner Byron (via
9 telephone)

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12 Christopher Meyer, CEC Project Manager (via telephone)

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15 Felicia Bellow, Tessera Solar

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19 Joshua Basofin, Defenders of Wildlife

20 Laura Cunningham, Basin and Range Watch

21 Kevin Emmerich, Basin and Range Watch

22 Gloria Smith, Esq., Sierra Club

23 Wayne Weierbach, Newberry Community Service District

24
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Steven Lamb, Burlington Northern Santa Fe (BNSF)

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PROCEEDINGS

1
2 HEARING OFFICER KRAMER: And welcome to day three
3 of the Calico Solar Project evidentiary hearings.

4 My name is Paul Kramer. I'm the hearing officer.

5 Commissioner Eggert, the presiding member, is
6 here with me. Lorraine White should be joining us in a
7 little bit. She is Commissioner Eggert's advisor.

8 Commissioner Byron's advisor is listening on the telephone
9 with us; that's Kristy Chew.

10 And we are ready to go with the topic of soil and
11 water resources.

12 I note that Mr. Scott will be calling in at
13 11:00 a.m., so we will break at that point and whatever
14 we're doing to hear his testimony.

15 MS. HOLMES: One of the things that would be
16 helpful for staff would be to know -- to have an
17 identification of which witnesses are handling the
18 different aspects of the applicant's water testimony.
19 We've got drainage issues, water supply issues, and water
20 quality issues.

21 MS. FOLEY GANNON: Correct.

22 HEARING OFFICER KRAMER: Are you suggesting there
23 would be some value in breaking them out?

24 MS. FOLEY GANNON: I concur with that.

25 MS. HOLMES: I'm sorry, somebody there was

1 talking.

2 HEARING OFFICER KRAMER: Applicant -- the
3 applicant thinks it might be useful to handle the three
4 separately, similar to what we did for bio resources
5 yesterday.

6 MS. FOLEY GANNON: Actually, I think you can do
7 two together. I think the sedimentation water quality
8 issues make sense to go together. And water supply I
9 think can be done separately. And Mr. Scott is speaking
10 only to water supply. So we could do the sedimentation
11 water quality first.

12 HEARING OFFICER KRAMER: Does that work for you,
13 Ms. Holmes?

14 MS. HOLMES: Sure.

15 HEARING OFFICER KRAMER: Okay. So let's go with
16 the applicant's sedimentation and water quality witness
17 panel or single witness.

18 MS. FOLEY GANNON: We will be calling Bob Byall
19 and Matt Moore, neither of who have been sworn in.

20 HEARING OFFICER KRAMER: Mr. Reporter, do you
21 have their names already?

22 Okay. So gentlemen, if you could raise your
23 right hand.

24 (Matthew Moore and Robert Byall were sworn.)

25 HEARING OFFICER KRAMER: Just so you know, you

1 have need to be very close to the microphone as if you are
2 a rock star.

3 DIRECT EXAMINATION

4 MS. FOLEY GANNON: Good morning, Mr. Byall. Are
5 you the same --

6 MS. HOLMES: Could you speak up, please?

7 MS. FOLEY GANNON: Certainly.

8 Good morning, Mr. Byall. Are you the same Robert
9 Byall who has presented written testimony in these
10 proceedings which are marked as Exhibits 66 and 86?

11 MR. BYALL: Good morning. Yes, I am.

12 MS. FOLEY GANNON: And is the resume that is
13 attached to those exhibits still accurate and correct?

14 MR. BYALL: It is.

15 MS. FOLEY GANNON: Do you have any additions or
16 corrections to make to that written testimony?

17 MR. BYALL: I do not.

18 MS. FOLEY GANNON: Thank you.

19 Mr. Byall, can you describe the role that you
20 have played with regards to the Calico project?

21 MR. BYALL: Yes. I'm the civil engineer for
22 Tessera Solar. I've been responsible for the acquisition
23 of --

24 MS. HOLMES: I'm sorry, we can't hear.

25 MR. BYALL: I'm sorry. I'm rather soft-spoken,

1 so I hope this helps a little bit.

2 MS. HOLMES: That's much better.

3 MR. BYALL: I am Tessera Solar's civil engineer.
4 I have been responsible for the acquisition of the
5 consulting firm that prepared the drainage report and the
6 geomorphic analysis for the Tessera project called Calico.

7 MS. FOLEY GANNON: Thank you.

8 And as part of that analysis, have you done a
9 study of the site's hydrology?

10 MR. BYALL: The consultant that we hired has,
11 yes.

12 MS. FOLEY GANNON: And have you reviewed that
13 report?

14 MR. BYALL: I have.

15 MS. FOLEY GANNON: And did that report do an
16 analysis about the drainage patterns and the sedimentation
17 flow on the site?

18 MR. BYALL: It did. It analyzed the flow from
19 the Cady Mountains as the water is developed -- watershed
20 is developed at the Cady Mountains, flows across the
21 northern portion of our project as it reaches the
22 BNSF Railroad.

23 They also analyzed the water as it flows from the
24 east and the south as generated from the Lavic Mountains
25 being intersected by I-40, and then as it proceeds to the

1 interception by BNSF Railroad as it goes westward.

2 MS. FOLEY GANNON: And did you also analyze the
3 potential impact of installing the solar field on this
4 site could have on those drainage patterns and sediment
5 transport?

6 MR. BYALL: We did.

7 MS. FOLEY GANNON: And what conclusions did you
8 come to?

9 MR. BYALL: Our conclusion is that we would have
10 a less than significant impact on the entire drainage
11 system. We feel that the major impacts to the site have
12 already occurred from I-40 and from BNSF.

13 MS. FOLEY GANNON: So is it your testimony that
14 essentially the drainage patterns, the overall drainage
15 patterns on the site will remain the same subsequent to
16 project construction?

17 MR. BYALL: They will remain intact and will not
18 be affected by our systems.

19 MS. FOLEY GANNON: And will the amount of
20 sedimentation that is moving through the system be altered
21 by construction of the project?

22 MR. BYALL: The detention basin will remove some
23 minor sediment from the system, but overall we don't feel
24 there would be a significant interference with the
25 sediment transport to that system.

1 MS. FOLEY GANNON: And I understand that the area
2 north of the railroad is largely an alluvial fan; is that
3 correct?

4 MR. BYALL: That is correct.

5 MS. FOLEY GANNON: And is it your opinion or have
6 you analyzed the impact of installing SunCatchers on this
7 alluvial fan?

8 MR. BYALL: Yes. The SunCatchers themselves, the
9 installation of the SunCatchers, they're stable, they'll
10 be down around 18 feet. We've --

11 MS. HOLMES: I'm sorry, you need to speak a
12 little more slowly and a little bit louder, please.

13 HEARING OFFICER KRAMER: You need to be directly
14 pointed at the mic.

15 MR. BYALL: Directly --

16 HEARING OFFICER KRAMER: If you go to the side,
17 it goes away.

18 MR. BYALL: Okay. Rock star type thing again.
19 There; maybe that will help.

20 We have done testing in several locations.
21 Maricopa Solar, which is in Peoria, Arizona, we've
22 installed pedestals, done pull tests on them at various
23 depths. We've done it at Sandia Labs, which is in
24 Albuquerque, New Mexico. And we've just recently
25 completed a study actually in Fontana. I have not seen

1 the results of that one, but we've done that.

2 Stability shows that the SunCatcher pedestal will
3 maintain integrity up to about ten feet of penetration and
4 still be able to support the SunCatcher, even though we
5 will install them around 18.

6 MS. FOLEY GANNON: And did you look at what the
7 impact of having potential high-velocity flows through the
8 site could have on the SunCatchers?

9 MR. BYALL: We did. We looked at several of the
10 existing washes, both on the south side between I-40 and
11 BNSF Railroad, and also the washes from BNSF Railroad
12 north to the Cady Mountains. We have determined that
13 there are several washes that we will not be installing
14 SunCatchers in due to the potential of scour. We have
15 limited our scour depth to four feet as a safety
16 precaution.

17 So the washes that have a higher velocity and
18 will be known to create a scour deeper than four feet, we
19 are avoiding.

20 MS. FOLEY GANNON: And when you're describing
21 this scour, can you describe exactly how that would happen
22 with the SunCatchers, that the waters coming in is going
23 to scour out some of the sand behind the SunCatcher? Is
24 that how it would be working?

25 MR. BYALL: Actually, it's around it. And the

1 SunCatcher pedestal itself works much as -- similar as a
2 bridge pier; so as water is rushing by it, it has a
3 tendency to create turbulence, a little horseshoe -- what
4 we call "horseshoe vortexes" that remove sediment from
5 around the pedestal itself.

6 And the four foot depth is what happens during
7 the peak flow, at least, it could actually be more than
8 that; but in this case, we're installing it -- the maximum
9 scour depth, both general and local, would occur during
10 the peak flow, and as that peak flow subsides, then
11 sediment would be redeposited within the area so that the
12 overall depths when it's all said and done may vary from,
13 oh, to a foot or so.

14 MS. FOLEY GANNON: So I understand -- so if --
15 you're anticipating that there's going to be some scour
16 and movement of sediment in a high velocity event; is that
17 correct?

18 MR. BYALL: That is correct.

19 MS. FOLEY GANNON: But you testified a few
20 minutes ago that you don't anticipate there to be any real
21 change on the sediment load overall on the site. Can you
22 explain how you come to that conclusion?

23 MR. BYALL: Sure.

24 Basically, the detention basins are made so that
25 they're just taking the peak flow off, we're only

1 detaining a portion of the storm. And we'll get into that
2 a little bit later. Sediment still will be allowed to
3 flow through the detention basin, and it will be -- the
4 flow will be distributed throughout the watershed.
5 Basically, it will fall within the same parameter as they
6 washed originally, it will have basically the same width.
7 We'll do energy dissipation.

8 So it will have sediment in them already as they
9 progress, we're not removing it -- creating a clear water
10 system. Also, the SunCatchers also will create some
11 roughness, which will also somewhat attenuate the loss of
12 deposition.

13 MS. FOLEY GANNON: That was going to be my next
14 question about -- with regard to the roughness.

15 Is there going to be some vegetation clearing
16 that will occur in the drainages?

17 MR. BYALL: On some occasions, yes; it depends
18 upon where it is. Our SunCatcher installation, basically
19 on every other row we are going to trim the vegetation to
20 within about three feet of the surface. So if the wash --
21 and the SunCatcher is in there, yes, we will trim some of
22 it.

23 MS. FOLEY GANNON: But there wouldn't be overall
24 vegetation clearing that would occur?

25 MR. BYALL: No, we do not do that.

1 MS. FOLEY GANNON: And again, when you were
2 looking at the existing conditions, would you describe
3 this as sort of a dynamic site, so there's sort of
4 sedimentation that's moving through the system on a
5 regular basis; is that accurate?

6 MR. BYALL: Actually, it is an active alluvial
7 fan, so there's erosion, there's deposition, there's scour
8 that occurs naturally within the washes themselves.

9 MS. FOLEY GANNON: And you had described earlier
10 some of the existing improvements in the area that may
11 have affected the hydrology as exists today as the
12 railroad and I-40 particularly?

13 MR. BYALL: Yes.

14 MS. FOLEY GANNON: And so the sedimentation
15 that's moving through the system now, when it gets to the
16 railroad, what generally happens with it?

17 MR. BYALL: It all falls out, or at least the
18 majority of it falls out. That's one of the reasons, if
19 you've ever been out there, you find that the area around
20 the railroad is very fine in the sand.

21 Water carries sediment based upon its velocity.
22 Without higher velocity, the larger particles fall out;
23 and as you get slower and slower, smaller particles start
24 to fall out.

25 MS. FOLEY GANNON: So when the water comes down

1 and reaches the railroad, it's essentially slowed down as
2 it's diverted to the --

3 MR. BYALL: West.

4 MS. FOLEY GANNON: -- to the west. And at that
5 point most of the heavier sediment, at least, is going to
6 settle out?

7 MR. BYALL: Actually, most of the heavier
8 sediment has already fallen out by that time, because the
9 watershed, the alluvial fan starts out at around six
10 percent, ends up to around one or two percent.

11 MS. FOLEY GANNON: And would you have a similar
12 interaction around Highway 40?

13 MR. BYALL: Actually, Highway 40 acts as more of
14 a dike type thing. It impedes the flow of -- as occurs
15 naturally across it. Typically it would have been more of
16 a sheet flow, and now they've concentrated around the box
17 culverts, which cause sediment to fall out as the water
18 ponds up.

19 MS. FOLEY GANNON: So in addition to looking at
20 the potential impacts to sedimentation loads, one would
21 anticipate that there could be an impact from creating a
22 higher level or any impenetrable surfaces on the site.

23 Did you analyze the potential impacts associated
24 with that?

25 MR. BYALL: We've taken a look at it. The

1 impermeable areas would be confined to our maintenance
2 roads, our service roads, and the main entrance roads, the
3 SunCatcher pedestal itself, and the main service complex
4 area.

5 The main service complex area, by county code,
6 will require a retention basin; in other words, we will
7 capture the water from the pre and post and hold it
8 permanently until the water is either evaporated or
9 infiltrated. It's required to drain within 72 hours, so
10 we'll make sure that that happens.

11 MS. FOLEY GANNON: And with regard to -- in the
12 supplemental staff assessment, included a study which was
13 conducted by PWA on -- it was a geomorphic assessment.

14 MR. BYALL: Yes.

15 MS. FOLEY GANNON: Have you had an opportunity to
16 review that document?

17 MR. BYALL: I have.

18 MS. FOLEY GANNON: Can you comment on the
19 analysis and conclusions provided in that document?

20 MR. BYALL: The final version?

21 MS. FOLEY GANNON: The final version?

22 MR. BYALL: The final version, basically their
23 analysis was that the detention basins on the northern
24 side would have no significant impact on the sediment
25 transport for the entire system, and I agree with that.

1 MS. FOLEY GANNON: Let's turn now to the
2 discussion of the detention basin.

3 Can you describe for us where the detention
4 basins are proposed to be located?

5 MR. BYALL: There are 16 basins that are proposed
6 along the northern border, and there's two temporary ones
7 between Phase I and Phase II.

8 MS. FOLEY GANNON: And can you describe the
9 sizing of these basins?

10 MR. BYALL: The basins were sized basically to
11 attenuate the peak flow to a point where we felt we could
12 control the velocities and the amount of sediment
13 downstream of us for maintenance purposes.

14 MS. FOLEY GANNON: And how much water are they
15 designed to hold?

16 MR. BYALL: They're designed to hold 12 acre
17 feet.

18 MS. FOLEY GANNON: And can you describe again the
19 basic purpose of why you are proposing to include
20 detention basins in the project design?

21 MR. BYALL: It's more of an economic
22 maintenance-type issue. It's a lot better to have an area
23 where you -- where the deposition is known so that we can
24 go out and clean out the basins rather than having to run
25 equipment all over the 6200 acres.

1 MS. FOLEY GANNON: So the intent is that the
2 water flowing in off the mountain will have heavy debris
3 and you're trying to capture that?

4 MR. BYALL: That is correct. We're trying to
5 minimize the amount of heavy debris and some of the
6 lighter debris that actually falls within our riparian
7 systems.

8 MS. FOLEY GANNON: And if you didn't have that,
9 it would fall out someplace else on the site?

10 MR. BYALL: It would just go downstream and do
11 what it normally does. Deposition is going to vary from
12 six inches to sixteenth of an inch across the site
13 somewhere.

14 MS. FOLEY GANNON: And if it was flowing
15 throughout the rest of the site, I think you said you'd
16 have to just do more maintenance?

17 MR. BYALL: We would have to do it over a wider
18 area.

19 MS. FOLEY GANNON: So you would still be going
20 through and cleaning out the debris, but it just wouldn't
21 be concentrated in a single area; is that correct?

22 MR. BYALL: That's correct.

23 MS. FOLEY GANNON: Thank you.

24 Have you had a chance to review the analysis
25 include in the supplemental staff assessment?

1 MR. BYALL: I have.

2 MS. FOLEY GANNON: And do you have any comments
3 on that analysis?

4 MR. BYALL: We agreed to the conditions of
5 certification for Geo 1, Soil and Water 1, 2, 3, 5, and 8.
6 I take exception to part 7. Our berms are not dams. The
7 actual berm is five feet high, but retention -- or the
8 retention area behind the dam is only three, it doesn't
9 follow the dam safety -- or Division of Safety of Dam's
10 criteria.

11 MS. FOLEY GANNON: So the intent of this
12 condition is to ensure compliance with the dam safety
13 regulations; is that correct?

14 MR. BYALL: Division of Safety of Dams, that's
15 correct.

16 MS. FOLEY GANNON: And you feel like these don't
17 apply because -- can you describe why?

18 MR. BYALL: We don't fall under the jurisdiction
19 of the safety -- the impoundment is not six feet high nor
20 is it more than 15 acre feet.

21 MS. FOLEY GANNON: Thank you.

22 Are there any other conditions which you wish to
23 comment on?

24 MR. BYALL: I'd like to revise conditions for
25 Soil and Water 3 relating to the monitoring effect after a

1 ten-year event.

2 MS. HOLMES: I'm sorry, we're having a lot of
3 trouble hearing. And to the extent that -- well, never
4 mind. Just continue. I'll ask some questions on
5 cross-examination.

6 MS. FOLEY GANNON: So with regard to soil and
7 water, the applicant has proposed some revisions to the
8 monitoring schedule as well as some other suggested
9 language. Can you describe overall the basis for those
10 proposed changes?

11 MR. BYALL: Yes.

12 Basically the flow generated, you probably won't
13 get water in a -- flowing in a wash for anything less than
14 a five-year storm. We -- it looks like a five-year storm
15 or better would happen. Ten-year events would be more
16 applicable since they will be the ones that more actually
17 generate flow. We propose that we do it over a ten-year
18 event rather than a five-year event.

19 MS. FOLEY GANNON: And the way the condition was
20 phrased in the supplemental staff assessment, they were
21 requiring this monitoring after every storm event; is that
22 correct?

23 MR. BYALL: That is correct.

24 MS. FOLEY GANNON: And you believe that's not
25 necessary because there won't be flows post those events?

1 MR. BYALL: There won't be runoff generated.

2 MS. FOLEY GANNON: Okay. Thank you.

3 HEARING OFFICER KRAMER: Are these changes shown
4 in 82A?

5 MS. FOLEY GANNON: 82A, yes.

6 HEARING OFFICER KRAMER: Thank you.

7 MS. FOLEY GANNON: Thank you, Mr. Byall.

8 Mr. Moore, are you the same Matt Moore who
9 provided written testimony which is offered here as
10 Exhibit 74 in these proceedings?

11 MR. MOORE: Yes, I am.

12 MS. FOLEY GANNON: And is the resume that was
13 included in that testimony still accurate and correct?

14 MR. MOORE: Yes, it is.

15 MS. FOLEY GANNON: And do you have any additions
16 or corrections to make to your earlier testimony?

17 MR. MOORE: No. I think we covered the Soil And
18 Water Condition 3. Mr. Byall spoke on that.

19 MS. FOLEY GANNON: Thank you.

20 Can you describe briefly the role that you helped
21 play with regard to the Calico project?

22 MR. MOORE: I was the original author of the
23 application for certification water resources section. I
24 performed soil erosion calculations for the project and
25 overall general support on the water resources end.

1 MS. HOLMES: Again, a little bit more slowly, and
2 closer to the mic, please.

3 MR. MOORE: Okay.

4 MS. FOLEY GANNON: So your role is in relation to
5 the storm water treatment; is that correct?

6 MR. MOORE: That's correct. I had a role in
7 performing the soil erosion calculations as well as
8 coordinating with the Regional Water Quality Control
9 Board, the CEC, and BLM on the report of waste discharge
10 prepared for the evaporation pond discharge.

11 MS. FOLEY GANNON: And in order to assess the
12 potential impacts on water quality related to runoff on
13 the site, did you do any modeling on the site to assess
14 the current conditions?

15 MR. MOORE: Yes.

16 We ran standard soil erosion loss calculations
17 for the project to analyze the existing condition soil
18 erosion runoff.

19 MS. FOLEY GANNON: And did you also do a
20 calculation of the erosion and runoff post project
21 construction?

22 MR. MOORE: Yes, we did. We analyzed
23 post-project conditions with the latest layout for the
24 project.

25 MS. FOLEY GANNON: And based upon that analysis,

1 did you identify methods that would be implemented to
2 treat or control runoff on the site?

3 MR. MOORE: Yes.

4 We -- in the modeling, we utilized -- assuming
5 that the project's going to employ standard best
6 management practices during construction, post
7 construction to analyze the impacts of the project on the
8 soil erosion rates.

9 MS. FOLEY GANNON: And were you able to analyze
10 the overall effect of the project if these BMPs that
11 you've identified were implemented?

12 MR. MOORE: Yes. With the BMPs implemented, the
13 best management practices during construction and
14 operation with proper installation and maintenance, that
15 there would be no significant impact on the soil erosion
16 rates from the project.

17 MS. FOLEY GANNON: And in doing these
18 calculations again, you used the standard model, which
19 model did you use?

20 MR. MOORE: We utilized the Revised Universal
21 Soil Loss Equation II produced by the Natural -- the
22 Natural Resources Conservation Service.

23 MS. FOLEY GANNON: And what are the factors
24 that -- the parameters that are used to inform that model?

25 MR. MOORE: The parameters involved are the

1 slope, the soil type, the BMPs implemented, whether we're
2 in a cut or a fill situation, and the rainfall on the
3 project site.

4 MS. FOLEY GANNON: Overall, have you made any
5 conclusion about the project's impact on water quality?

6 MR. MOORE: Yes.

7 I think -- my opinion is with proper
8 implementation of those best management practices during
9 construction and operation, that there would not be a
10 significant impact to soil and erosion from the project.

11 MS. FOLEY GANNON: And have you reviewed the
12 supplemental staff assessment?

13 MR. MOORE: Yes, I have.

14 MS. FOLEY GANNON: And do you have any comments
15 on the analysis or the conclusions contained in there?

16 MR. MOORE: In part, I would agree with the
17 assumptions. The only item that I mentioned was what
18 Mr. Byall talked about, was the Soil and Water Condition
19 3, that we propose a change to monitoring after every
20 ten-year storm event.

21 MS. FOLEY GANNON: Thank you.

22 These witnesses are available for
23 cross-examination.

24 HEARING OFFICER KRAMER: Staff?

25 MS. HOLMES: Thank you.

1 First of all, one of the witnesses here pointed
2 out that he didn't believe he heard the witnesses be
3 sworn.

4 HEARING OFFICER KRAMER: They were.

5 MS. HOLMES: Okay. That's good.

6 I have a preliminary question. I thought I heard
7 Mr. Byall say that he was willing to accept staff's
8 proposed Soil and Water 8, which is shown as being
9 stricken in the rebuttal testimony. Can I get a
10 clarification about that, please? It would considerably
11 change the amount of cross-examination we might have.

12 HEARING OFFICER KRAMER: They're working on an
13 answer for you.

14 MS. FOLEY GANNON: I think we forgot to reference
15 the requested change in Soil and Water 8 -- not the
16 change, the request that it be eliminated.

17 And, Mr. Byall, can you comment on the request to
18 limit this condition?

19 MR. BYALL: Yeah. It was --

20 MS. HOLMES: We can't hear.

21 MS. FOLEY GANNON: Speak into the mic.

22 MR. BYALL: Condition 8 was based upon the SWPP
23 that was removed.

24 MS. HOLMES: I'm sorry, I still can't hear.

25 MR. BYALL: It was based upon the SWPP which was

1 changed, I believe, or altered.

2 MS. FOLEY GANNON: Was it your contention that
3 the information that was requested in this condition will
4 be included in the project SWPP?

5 MR. BYALL: That is correct.

6 MS. FOLEY GANNON: And that this condition you
7 believe was unnecessary?

8 MR. BYALL: Yes, that is correct.

9 MS. FOLEY GANNON: All right. Thank you.

10 CROSS-EXAMINATION

11 MS. HOLMES: Is it your testimony that the SWPP
12 will contain all of the types of measures what are
13 indicated in Soil and Water 8?

14 MR. BYALL: Yes, that is correct.

15 MS. HOLMES: Okay. All right. Let's start then.
16 Am I speaking to Mr. Byall?

17 MR. BYALL: Yes.

18 MS. HOLMES: Good morning.

19 MR. BYALL: Good morning.

20 MS. HOLMES: I'd like to go through the
21 development of drainage plans for this project.

22 My recollection is that you originally started
23 with six large excavations on the northern boundary; is
24 that correct?

25 MR. BYALL: That is correct.

1 MS. HOLMES: And that you, at some point -- I
2 believe in June we found out that you planned instead to
3 use 16 bermed impoundments; is that correct?

4 MR. BYALL: That is correct.

5 MS. HOLMES: And the diagrams that you submitted
6 in June indicated that those impoundments would have dams
7 as high as 15 feet; is that correct?

8 MR. BYALL: That is incorrect. They are five
9 feet from the toe slope --

10 MS. HOLMES: I'm asking about what you submitted
11 in June. And I can point you to the specific, I can point
12 you to the specific item, if you'd like. The June 16th
13 submittal. I don't know if the applicant marked this as
14 an exhibit or not. A June 16th submittal. It has a cover
15 sheet followed by a series of tables and graphs. This is
16 on the second page of the June 16th submittal.

17 MS. FOLEY GANNON: What is the title of that
18 submittal?

19 MS. HOLMES: It says "Re: Calico Solar,
20 Clarifications to Applicant's Response to CEC," e-mail
21 dated June 4th, 2010. It's dated June 16th.

22 MR. BYALL: I have to get that exhibit in front
23 of me before I can comment.

24 MS. HOLMES: Sure.

25 MS. FOLEY GANNON: I'm sorry. We need a minute.

1 We're not sure if that was marked as an exhibit. We have
2 our exhibits with us.

3 We believe it is Exhibit 60. And it is just
4 being given to Mr. Byall.

5 MS. HOLMES: That comports with my understanding.

6 MS. FOLEY GANNON: Just if we could have a moment
7 for Mr. Byall to look at this exhibit.

8 MR. BYALL: I believe what you're referring to,
9 the 15-foot height is the depth of the excavation behind
10 the dike, not in front of it.

11 MS. HOLMES: Correct.

12 MR. BYALL: Yeah. The way my interpretation, the
13 way of my understanding of the Division of Safety of Dams
14 regulation is concerned with the toe of slope to the
15 maximum height of the impoundment.

16 MS. HOLMES: I'm not specifically talking about
17 the issue of jurisdiction of the Bureau of the Safety of
18 Dams, I'm just trying to understand how this project has
19 changed in the last six weeks or so, last eight weeks.

20 So if you look at the next page of that document,
21 which is a table entitled "Preliminary Debris Detention
22 Basin Sizing Along Northern Project Boundary" -- do you
23 have that?

24 MR. BYALL: I do.

25 MS. HOLMES: And it shows that the detention

1 basin depth is approximately 15 feet deep?

2 MR. BYALL: Yes. Those basins have been changed
3 because the outflow has been increased.

4 MS. HOLMES: Oh. Do we have diagrams of the new
5 impoundments?

6 MR. BYALL: You do not yet.

7 MS. HOLMES: Okay. Let me ask some more
8 questions about -- is this table still -- much of staff's
9 assessment has been based on the information that was
10 provided in June. Have other items in this table changed
11 as well?

12 MR. BYALL: The peak outflows have changed. As I
13 indicated earlier, we have increased those. Inflow
14 volumes would be the same to the basins. The storage
15 basin detention volumes have been changed.

16 MS. HOLMES: So you had originally proposed to
17 have a detention basin storage volume of 610 acre feet; is
18 that correct?

19 MR. BYALL: The total would be 610; that is
20 correct.

21 MS. HOLMES: And if my math is correct, and
22 there's a good chance that it's not, my understanding,
23 based on your earlier testimony, now is that perhaps the
24 detention basin storage volume would be as low as 192 acre
25 feet?

1 MR. BYALL: That is correct, or reasonably
2 correct. I can't do the math in my head either.

3 MS. HOLMES: But the inflow into the site during
4 a hundred-year storm is still 1244 acre feet.

5 MR. BYALL: That is correct.

6 MS. HOLMES: And you have the ability to retain
7 192; you're proposing at this point to have the ability to
8 retain 192 acre feet.

9 MR. BYALL: No. We are proposing the ability to
10 detain 192 acre feet.

11 MS. HOLMES: Down from 610 acre feet?

12 MR. BYALL: That is correct.

13 MS. HOLMES: If you look at any one of the maps
14 of the site, it shows that there are a couple of these
15 detention basins. They're all along the northern
16 boundary. There's a couple on the eastern section, and
17 then the remainder are -- excuse me, on the western
18 section, and then there are -- the remainder are in the
19 eastern section; is that correct?

20 MR. BYALL: That is correct.

21 MS. HOLMES: And are there three drainages that
22 flow onto the site in between those detention basins?

23 MR. BYALL: There are.

24 MS. HOLMES: And can you show me to a place in
25 your testimony where you have identified how you're going

1 to address the flows associated with those three
2 drainages?

3 MR. BYALL: Actually, the easternmost one will be
4 intercepted by a single basin. The two remaining ones
5 that come in off our property will not be intercepted at
6 all, they will be allowed to flow freely through the site.

7 MS. HOLMES: A moment, please.

8 On the USGS map, is that stippled as a flood zone
9 area?

10 MR. BYALL: I don't believe USGS maps stipulate
11 flood zone areas.

12 MS. HOLMES: Okay. Well --

13 MR. BYALL: It's shown as a wash, it's indicated
14 as a wash, it's not indicated as a flood zone.

15 MS. HOLMES: And I'm looking again at the same
16 Exhibit 60. And I'm looking at the three -- the third
17 sheet, I believe it is, the one that's entitled "Overall"?
18 It shows a series of detention basins and then indicates
19 the additional sheets on which those are found.

20 Do you have that in front of you?

21 MR. BYALL: The sheet numbers that the details
22 are shown?

23 MS. HOLMES: This is the overall --

24 MR. BYALL: Yes.

25 MS. HOLMES: It indicates where all the sheets

1 are.

2 Can you -- which drainage is it that you said is
3 intercepted? Which of the three drainages that you said
4 is intercepted by one of the detention basins?

5 MR. BYALL: The easternmost one. If you take a
6 look under the "S" for sheet three, you'll find that
7 there's a basin right there under C --

8 MS. HOLMES: At the very corner.

9 MR. BYALL: At the very corner.

10 MS. HOLMES: Yeah, thank you.

11 And I apologize, Ms. Foley Gannon, I had the
12 exhibit numbers written down, and I don't have them in
13 front of me. In the June 11th filing, which is
14 applicant's response to CEC e-mail dated June 4th, it's a
15 similar title, but this one is June 11th as opposed to
16 June 16th.

17 MS. FOLEY GANNON: Okay. Just give us a moment
18 to pull it.

19 MS. HOLMES: Sure.

20 HEARING OFFICER KRAMER: 59 maybe?

21 MS. HOLMES: One would hope.

22 MS. FOLEY GANNON: We're giving it to Mr. Byall
23 now.

24 MR. BYALL: The one that says "Overall Site Plan"
25 dated 6-9-10?

1 MS. HOLMES: No. I'm looking at the June 11th
2 filing. It's got a series of questions and answers
3 that -- by technical area. It was a response to a CEC
4 e-mail asking for additional information given the major
5 project changes that were proposed in May or June -- May,
6 I guess.

7 But perhaps -- let me maybe just ask the
8 question, and maybe you won't -- will not have to have it
9 in front of you.

10 I believe that you testified that the owner has
11 specified a maximum flow depth of 1.5 feet and a maximum
12 scour depth of four feet?

13 MR. BYALL: That is correct.

14 MS. HOLMES: Can you explain to me the technical
15 basis for those specifications?

16 MR. BYALL: Yes, I can. Our electrical cabinets
17 are two feet above grade, therefore, our maximum depth was
18 set at 1.5 feet to give us about a six-inch freeboard.
19 The four foot scour depth is based upon what we feel is a
20 margin of safety on our SunCatcher pedestal based upon the
21 design.

22 MS. HOLMES: And does your four foot scour depth
23 take into account the lateral migration of the alluvial
24 drainages on the site?

25 MR. BYALL: It does.

1 MS. HOLMES: And what is your estimate of the
2 amount of depth that could be -- that a SunCatcher that's
3 currently not in an alluvial drainage -- how much lower
4 could it be if drainage migrates laterally to where that
5 SunCatcher is? In other words, what are you assuming the
6 depth of the alluvial drainages that may migrate to be?

7 MR. BYALL: We are assuming that the SunCatcher
8 would not be exposed to a lateral migrating wash that
9 would scour more than four feet.

10 MS. HOLMES: So are there areas that you're
11 proposed not to place SunCatchers based on that
12 specification?

13 MR. BYALL: That is correct.

14 MS. HOLMES: Do we have a map of those?

15 MR. BYALL: Not yet.

16 MS. HOLMES: Well, I think those are all my
17 questions.

18 HEARING OFFICER KRAMER: Thank you.

19 MS. HOLMES: I do have a question on the water
20 supply -- excuse me, on the water quality issue.

21 HEARING OFFICER KRAMER: That was going to be
22 with supply, correct?

23 MS. FOLEY GANNON: No.

24 HEARING OFFICER KRAMER: Okay. Go ahead.

25 MS. HOLMES: I thought Mr. --

1 MS. FOLEY GANNON: It's Mr. Moore.

2 HEARING OFFICER KRAMER: You're correct. Go
3 ahead.

4 MS. HOLMES: Mr. Moore, are you familiar with the
5 third draft of the report of waste discharge that was
6 received by the energy commission staff this morning?

7 MR. MOORE: Yes, I am.

8 MS. HOLMES: Can you explain to us, since we
9 haven't had a chance to look at it, how it's changed since
10 the last report of waste discharge?

11 MR. MOORE: The substantial changes are inclusion
12 of the table that includes the proposed waste -- the water
13 quality discharge to the evaporation ponds, as well as
14 additional information regarding the monitoring and
15 reporting. I believe that's in -- the monitoring and
16 reporting, I don't have the report here in front of me,
17 but I believe it's in section six.

18 MS. HOLMES: Okay.

19 MR. MOORE: And that's in line with standard --
20 more of the standard waste discharge requirements that are
21 typically included for evap ponds.

22 MS. MILES: Excuse me. This is Loulena Miles
23 from CURE. And I was wondering, I didn't receive anything
24 this morning. Was something docketed this morning? No?

25 MR. MOORE: No, this was sent -- this is Matt

1 Moore. This was sent to the Regional Water Quality
2 Control Board yesterday. The Regional Water Quality
3 Control Board is responsible for issuing the draft or the
4 waste discharge requirements.

5 MS. HOLMES: Does it include a proposal for
6 monitoring well installation?

7 MR. MOORE: Yes, it does. It includes the
8 monitoring well strategy, which includes a new proposed
9 compliance well at the southwest corner of the proposed
10 evaporation pond locations.

11 MS. HOLMES: All right. Well, I think the
12 committee is aware of some of the challenges that staff is
13 facing with the new information coming in at this point,
14 but we obviously can't respond in any detail until we've
15 had a chance to take a look. So with that, I think I'll
16 end my cross-examination.

17 HEARING OFFICER KRAMER: Why don't -- for the
18 record and people who aren't here and may read about this
19 later in the transcript, why don't you give us a minute on
20 the challenges.

21 MS. HOLMES: Well, I think we've got -- well,
22 actually, we've got direct testimony specifically on that
23 topic. We had challenges even before we received
24 additional new information this morning. And so I think
25 we can do that while we're doing direct examination.

1 HEARING OFFICER KRAMER: Okay. I'm just trying
2 to build a record here.

3 Thank you.

4 Basin and Range Watch, any questions?

5 They say no.

6 CURE?

7 MS. MILES: No questions.

8 HEARING OFFICER KRAMER: Burlington Northern?

9 CROSS-EXAMINATION

10 MR. LAMB: Good morning, Steve Lamb for BNSF.

11 Mr. Byall, if I understand you correctly, it's
12 your belief that the sediment that will normally come down
13 upgradient to the project will be stopped at the detention
14 basins; is that accurate?

15 MR. BYALL: This is Bob Byall.

16 No, that is incorrect. It will not be stopped.
17 It will be somewhat attenuated but not very much and will
18 still be allowed to flow naturally across the site.

19 MR. LAMB: Then what is the purpose of the
20 detention basins?

21 MR. BYALL: The purpose of the detention basins
22 is to give us a maintenance sort of hold on eliminating
23 some of the grading that would be caused by sediment
24 depositing across our SunCatcher field. So what we're
25 trying to do is localize it within the basins, not

1 completely eliminate it or make it so that we have to go
2 out and grade or chase down sediment deposition over the
3 6,000 acres.

4 MR. LAMB: And if I understand you correctly, the
5 effect of the water coming down as it hits the post that
6 holds the SunCatcher, there's going to be some
7 horseshoe-type erosion around that, correct?

8 MR. BYALL: There will be some scour around them,
9 yes, in certain locations.

10 MR. LAMB: What you refer to as scour would be a
11 horseshoe-type erosion?

12 MR. BYALL: Well, the -- for all practical
13 purposes, I suppose you could call it that.

14 MR. LAMB: Okay. And are you going to take the
15 sediment from the detention ponds and use that to fill
16 that erosion?

17 MR. BYALL: We may.

18 MR. LAMB: You just haven't decided yet?

19 MR. BYALL: Well, it would depend upon whether
20 the deposition is -- warrants that. If it's relatively
21 shallow, we're not going to mess with it.

22 MR. LAMB: Okay. I have no further questions.

23 Thank you.

24 HEARING OFFICER KRAMER: I'm confused a little
25 bit, because on the one hand you seem to be suggesting

1 that you're trying to collect this sediment in the
2 detention basin so it's in one place, you can then take it
3 and deal with it, as opposed to having to scrape it off
4 the much larger portion of the site; and yet you're saying
5 that you're not affecting the sediment flows very much.
6 But it sounds like you are trying to get the sediment away
7 from where it would naturally deposit into this basin so
8 you could more effectively deal with it.

9 Can you -- do you understand my conundrum here,
10 or my confusion?

11 MR. BYALL: Yes. I understand.

12 What we're trying to do is not create an adverse
13 condition where we would increase scour within the washes
14 themselves and cause degradation of the washes; so we're
15 trying to come up with a balance between what naturally
16 occurs and the interference we're going to cause by
17 installing the SunCatchers and the maintenance that would
18 be required because of that. So it's a little bit of a
19 balancing act here.

20 What we're trying to do is make it so that we
21 don't have to go out after every storm that creates a fair
22 amount of flow and go out and remove a whole bunch of
23 sediment from our at-grade crossings, fill in SunCatchers,
24 and do that kind of -- type of maintenance.

25 HEARING OFFICER KRAMER: Okay. Thank you.

1 Any redirect?

2 MS. FOLEY GANNON: Just a couple of questions.

3 REDIRECT EXAMINATION

4 MS. FOLEY GANNON: Mr. Byall, there is -- and I'm
5 referring now to Exhibit 57, which is a letter dated
6 June 2nd, 2010, to Mr. Meyer, and attached to that letter
7 there is an exhibit which is called "Alternative Number 2
8 Project Layout with 4,000-foot Corridors, Desert Tortoise
9 Corridor." This figure shows where the SunCatchers are
10 proposed to be located.

11 From this figure can you show where you're not
12 locating SunCatchers? The question was relating to is
13 there something that shows where SunCatchers are not going
14 to be located, which would include, I assume, the
15 SunCatchers that were not located in areas because of the
16 potential depth of the scour?

17 MR. BYALL: At this scale, no.

18 MS. FOLEY GANNON: But is the figure that is
19 showing where the SunCatchers are, would that reflect
20 where you chose not to put SunCatchers?

21 Do you understand my question?

22 So does the layout of the SunCatchers that is
23 shown on this exhibit, and we can find other exhibits as
24 well, show where the SunCatchers are proposed to be
25 located?

1 MR. BYALL: Yes. This is our standard layout for
2 SunCatchers across the site.

3 MS. FOLEY GANNON: And in your layout, did you
4 consider areas where you are not going to be locating the
5 SunCatchers?

6 MR. BYALL: In this exhibit, we did not.

7 MS. FOLEY GANNON: And there is not an exhibit
8 that shows that?

9 MR. BYALL: Not currently.

10 MS. FOLEY GANNON: Okay. Thank you.

11 One question for you, Mr. Moore.

12 The changes that were made to the waste discharge
13 reports or the report of waste discharge that was
14 submitted to the regional board and shared with the energy
15 commission staff, what was the source of those changes?

16 MR. MOORE: The source of those changes were
17 comments provided by the Regional Water Quality Control
18 Board after our initial submittal of the report of waste
19 discharge requesting basically additional information to
20 assist the regional board to prepare waste discharge
21 requirements for the project.

22 MS. FOLEY GANNON: So this was in response to
23 comments that you received from the agency?

24 MR. MOORE: Correct.

25 MS. FOLEY GANNON: And so this is part of the

1 iterative permitting process that you do with the regional
2 board?

3 MR. MOORE: That's correct.

4 MS. FOLEY GANNON: Okay. Thank you.

5 No further questions.

6 HEARING OFFICER KRAMER: Thank you.

7 That would bring us then to our second water
8 topic which would be -- I'm sorry.

9 MS. CUNNINGHAM: I have one question.

10 HEARING OFFICER KRAMER: Ms. Cunningham.

11 CROSS-EXAMINATION

12 MS. CUNNINGHAM: Would the vegetation be cut once
13 or annually or as an as-needed basis?

14 MR. BYALL: This is Bob Byall.

15 The vegetation would be cut once. And the only
16 other time it possibly would be done is if there was a
17 tree or a -- a tree basically that would interfere with
18 the movement of the SunCatcher. Other than that, there is
19 no maintenance.

20 MS. CUNNINGHAM: Okay. Thank you.

21 HEARING OFFICER KRAMER: That's the kind of yard
22 I'd like.

23 Okay. So then we move on to water supply? Do
24 I --

25 MS. FOLEY GANNON: Do we want to do that, or do

1 we want to do staff's witnesses on these subjects?

2 HEARING OFFICER KRAMER: Oh, I'm sorry. You're
3 right. I'm going to eventually wake up today I think.

4 So staff, your witnesses on those two topics.

5 MS. HOLMES: I'm sorry, I couldn't hear you.
6 What was the question?

7 HEARING OFFICER KRAMER: We're ready for your
8 witnesses now.

9 MS. HOLMES: Oh, good. Staff's witnesses, and
10 they need to be sworn, with respect to water quality and
11 drainage and flooding are Casey Weaver and Steve Allen.

12 HEARING OFFICER KRAMER: Okay. Gentlemen, raise
13 your right hand.

14 (Mr. Weaver and Mr. Allen were sworn.)

15 HEARING OFFICER KRAMER: Thank you. Go ahead,
16 Ms. Holmes.

17 MS. HOLMES: I think we're going to have to --
18 we're going to have to -- we're in a situation where we
19 can only have one mic on at a time, so I think we're going
20 to have to move around so we can share one mic between us.
21 It's not working to turn them on and off. So please bear
22 with us for a moment.

23 DIRECT EXAMINATION

24 MS. HOLMES: Mr. Weaver, did you prepare the --
25 were you responsible for the preparation of soil and water

1 resources section of Exhibit 300?

2 MR. WEAVER: Yes, I was one of the primary
3 authors.

4 MS. HOLMES: And was a statement of your
5 qualifications included?

6 MR. WEAVER: Yes, it was.

7 MS. HOLMES: And, Mr. Allen, did you assist
8 Mr. Weaver in preparation of that document, specifically
9 with respect to drainage and flooding issues?

10 MR. ALLEN: Yes, I did.

11 MS. HOLMES: Mr. Allen's qualifications were not
12 included in the supplemental staff assessment, so if I
13 could take 15 seconds for him to explain what his
14 qualifications are.

15 MR. ALLEN: I'm a registered California civil
16 engineer with 15 years' of experience in private
17 consulting in dealing with site plans, sediment control,
18 and hydrology, hydraulics.

19 MS. HOLMES: Thank you.

20 Mr. Weaver, are the facts contained in your
21 testimony true and correct to the best of your knowledge?

22 MR. WEAVER: Yes, they are.

23 MS. HOLMES: And do the opinions in your
24 testimony reflect your best professional judgment?

25 MR. WEAVER: Yes, they do.

1 MS. HOLMES: And do you have any changes or
2 corrections to make to your testimony?

3 MR. WEAVER: No, I don't.

4 MS. HOLMES: Okay. At this point what I'd like
5 you to do is to give a summary of the flooding and
6 drainage portion of your testimony.

7 MR. WEAVER: This will be a little repetitive.
8 Ms. Holmes provided a pretty good summary of it all. I'll
9 just reiterate what has occurred since the submission of
10 the SADEIS.

11 Regarding the flood control, in March 2010 the
12 applicant initially proposed excavation of six large pits
13 on the northern property boundary to contain the entire
14 flood flow from a hundred-year storm and protect the site
15 from flooding. From a flood control perspective, that
16 site design approach could effectively mitigate flood
17 impacts from off-site run-on. Analysis of this concept
18 was provided in the SADEIS. And subsequent to the
19 publication of that SADEIS, it came to our attention that
20 sensitive species would be affected by the proposed
21 complete capture of all flows up to a hundred-year storm.

22 According to the biologists, sand transported by
23 and deposited in the drainages becomes a source material
24 for wind transported sand dune development. These dunes
25 are important habitat for endangered reptiles and plants.

1 By cutting off the sediment transport by use of the pits,
2 the project would, in effect, irreplaceably harm the
3 adjacent dune systems.

4 The applicant's May 2010 supplement to the Calico
5 Solar application for certification continued to present
6 large pits as the preferred method of flood control.

7 In an e-mail dated June 4th, 2010, staff
8 requested from Tessera additional information regarding
9 the design for the flood control basins.

10 In a June 11, 2010, response to that e-mail, the
11 applicant proposed to modify their control design through
12 large pits to bermed impoundments that could contain flood
13 flows while allowing some non-designated smaller storm
14 flows to pass through the containment structure. This
15 pass-through flow was proposed to allow water and sediment
16 to travel down the drainages replenishing dune source
17 areas.

18 To accomplish flood control, retention
19 structures, earthen embankments or dams, would be
20 constructed across the drainages forming debris basins.
21 The debris basins were designed to retain the expected
22 volume of water and sediment from a hundred-year storm.
23 Tessera indicated the debris basin design is preliminary
24 and will be better designed following a drainage hydrology
25 report will be prepared at some later date.

1 The June 11 submittal provided an updated flood
2 control design that indicated ten basins would be
3 constructed along portions of the northern property
4 boundary. The new proposed design of the basins indicated
5 a dam of various height with 15 feet high being typical.
6 The design provided a cross-section figure of a pond which
7 has a berm or dam with a low flow pass-through pipe. On
8 that figure was another diagram entitled "pond --"
9 "Typical Pond Outlet." The typical pond outlet is
10 described as a weir that may be interpreted as a dam
11 spillway. There was not a plan view that matched these
12 sections.

13 Then in the June 11 response, a table entitled
14 "Preliminary Debris Detention Sites Along Northern
15 Property Boundary" was presented that listed the drainage
16 area designation, the corresponding drainage area acreage
17 expected inflow resulting from a hundred-year storm, the
18 expected outflow from the basin, the individual basin
19 storage volume in acre feet, and the number of weir
20 outlets for each drainage area. That table indicated that
21 one debris collection basin would be constructed for each
22 designated drainage area.

23 That table was revised on June 15th and again on
24 June 16th to account for redesigns to the debris basin
25 numbers and sizes. The June 15th revision was largely

1 modification to the preliminary debris retention basin
2 size along the boundary property table.

3 Then on June 16th an additional revised design
4 was submitted, which further refined the table and
5 provided plans that showed impoundments with spillways and
6 underlying pass-through pipes. These revisions
7 demonstrate the ongoing evolution of their conceptual
8 designs from six massive pits to as many as 16
9 impoundments.

10 In a table labeled "Preliminary Debris Detention
11 Basin Sizing Along Northern Property Boundary" revised
12 June 16th, it's indicated that 16 basins 15 feet deep
13 would retain 610 acre feet of flows. The same table
14 identified 1244 acre feet of inflow volume resulting from
15 the hundred-year storm.

16 In Mr. Byall's July 29 testimony, he states that
17 no debris basin will have a capacity more than 15 acre
18 feet nor dam height exceeding six feet.

19 It would take four ponds with a capacity of
20 15 acre feet to accommodate the 610 acre feet of flood
21 inflows and approximately twice that many to accommodate
22 the identified 1244 acre feet of inflow volume.

23 The applicant has not provided an indication of
24 how these discrepancies would be addressed to accomplish
25 the primary goal of protecting the site from a

1 hundred-year storm.

2 Additionally, through all these revisions and
3 debris design -- debris basin design, excuse me, there are
4 additional drainages that traverse the private property
5 near the center of the project and intersect the center
6 project site unimpeded. There are other boundaries of the
7 project area that also do not appear to address protecting
8 the site from a hundred-year storm. There's been no
9 provision presented to mitigate the potential project
10 impacts from flood flows from those additional drainages.

11 Another clarification I'd like to present from
12 Mr. Byall's testimony this morning regarding the
13 geomorphic assessment of the Calico Solar Project
14 indicated that the biologists, the geomorphologists
15 suggested that there would not be impact of sediment
16 transport from the construction of the basins. That was,
17 I think, misinterpreted as the sediment for the dunes
18 primarily supplied from the eastern and southern flows
19 onto the project site.

20 But on page 2 of that geomorphic assessment, it's
21 written, the review of the applicant's drainage plan shows
22 a proposed series of debris basins at the headwaters of
23 the main alluvial fan channels draining to the valley
24 floor as well as a series of detention basins closer to
25 the dune areas.

1 Over time these basins will cut off new supplies
2 of fluvial sediment from reaching sand dune areas,
3 reducing the amount of fine sediment available for wind
4 transport adjacent to the valley floor. This is will
5 likely lead to habitat degradation in which the dunes lose
6 sand to wind and water erosion, will not replace the sand
7 that is lost.

8 There is also a moderate risk that the alluvial
9 fan channels will incise, erode vertically downstream of
10 the basins in response to the reduction in sediment
11 supply. This may cause further loss of dune habitat
12 around the channels as they cut into the alluvial fan
13 surface and become more hydraulically efficient reducing
14 sediment water conductivity to the flood plain.

15 It's not clear how these impacts to on-site dune
16 habitat could be mitigated unless the drainage plan is
17 revised to eliminate all in-channel detention and
18 retention facilities, the pre-basins and detention basins.

19 So obviously the geomorphology report indicates
20 that the debris basins would, in fact, cause a significant
21 impact to the drainages.

22 MS. HOLMES: And this morning you heard testimony
23 about yet additional changes to the proposed plans; is
24 that correct?

25 MR. WEAVER: Yes, just this morning.

1 MS. HOLMES: And can you please explain how this
2 situation creates challenges for you in trying to review
3 the project?

4 MR. WEAVER: Well, sure.

5 We're trying to analyze the impacts of the
6 project on the environment. With the constant changes,
7 it's -- you know, we're get deluged with revisions.

8 MS. HOLMES: And do you have -- does staff have a
9 proposal to deal with the uncertainty associated with the
10 applicant's proposed design?

11 MR. WEAVER: Yes, we do. That's primarily shown
12 in our condition of certification Soil and Water 8. It
13 became apparent to the staff that the applicant's design
14 for flood control is still under development as further
15 evidenced in this morning's testimony. However, as
16 presented in the supplemental staff assessment condition
17 of certification of Soil and Water 8 was written to assure
18 that the applicant will develop an appropriate design and
19 will construct adequate flood control features that will
20 protect the site from flooding hazards.

21 Compliance with Soil and Water 8 will protect the
22 project from flow -- excuse me, from flood hazards
23 resulting from the hundred-year storm while allowing
24 pass-through of flows resulting from smaller storms to
25 replenish sediment in channels allowing groundwater

1 recharge along the drainages which will maintain the
2 function of the desert washes.

3 The applicant requests the elimination of
4 condition Soil and Water 8 based on the various changes
5 proposed by the applicant to control flooding. It is not
6 evident to staff that a suitable design of flood control
7 will be developed without adherence to Soil and Water 8,
8 therefore, it's imperative to the committee to retain Soil
9 and Water 8 as a condition of certification.

10 MS. HOLMES: Thank you.

11 And, Mr. Allen, there was testimony earlier this
12 morning that indicated the applicant thinks that a SWPP or
13 a storm water -- I can't remember exactly what it was
14 named for -- prevention plan would be an adequate
15 substitute for Soil and Water 8. Can you please respond
16 to that?

17 MR. ALLEN: Sure.

18 Soil and Water Condition 8 is intended to be more
19 of a -- provide information based on the design for what
20 the applicant is proposing. A SWPP, or storm water
21 pollution prevention plan, usually starts when the design
22 is complete, and then basically discusses erosion sediment
23 control, best management practices that would be
24 implemented during construction to try to mitigate erosion
25 sediment control.

1 MS. FOLEY GANNON: Hearing Officer Kramer,
2 Ms. Holmes, we have an offer to make that may simplify
3 some of this discussion.

4 The applicant is willing to stipulate to Soil and
5 Water 8 and agree with its inclusion.

6 MS. HOLMES: That does simplify things.

7 MS. FOLEY GANNON: Thank you.

8 MS. HOLMES: The only other thing I would like to
9 do then is, there were other proposed changes to the
10 conditions of certification Soil and Water 2, Soil and
11 Water 3, Soil and Water 10, Soil and Water 11, I'd like to
12 just ask the witnesses to very briefly summarize staff's
13 response.

14 Let me put them in front of them first.

15 It's right here. We got a little disorganized
16 when we had to all move to one mic.

17 Mr. Weaver, do you have a response to the
18 applicant's proposed changes to Soil and Water 2?

19 MR. WEAVER: Yes. We're in agreement with the
20 changes to Soil and Water 2.

21 MS. HOLMES: Soil and Water 3?

22 MR. WEAVER: Soil and Water 3, we do not agree
23 with the changes provided.

24 MS. HOLMES: Can either you or Mr. Allen explain
25 why you believe that the stability report is an important

1 component of this condition?

2 MS. FOLEY GANNON: We will also stipulate to
3 accepting the condition, if that is also of assistance.

4 MS. HOLMES: Thank you. It is.

5 Thank you.

6 Then, Mr. Weaver, do you have a response to the
7 applicant's proposal to add Soil and Water 10 and 11?

8 MR. WEAVER: We don't have any issue with
9 addition of those particular conditions.

10 MS. HOLMES: Thank you.

11 With that, the witnesses are available for
12 cross-examination.

13 HEARING OFFICER KRAMER: The applicant?

14 MS. FOLEY GANNON: No questions. Thank you.

15 HEARING OFFICER KRAMER: Basin and Range Watch?

16 MS. FOLEY GANNON: I'm sorry, Hearing Officer
17 Kramer, I do have one question.

18 HEARING OFFICER KRAMER: Go ahead.

19 CROSS-EXAMINATION

20 MS. FOLEY GANNON: And I'm not sure which of the
21 witnesses, or maybe both of the witnesses could address
22 this question.

23 Would your concerns about the project be lessened
24 if the detention basins were not included in the project?

25 MR. ALLEN: This is Steve Allen.

1 I don't -- I wouldn't characterize it that way.
2 I don't have a specific issue with the basins, I'm just
3 trying to fully understand their intent and how the design
4 would work.

5 MS. FOLEY GANNON: All right. Thank you.

6 MR. WEAVER: This is Casey Weaver.

7 I think if you look at Soil and Water 8, we have
8 provisions in there pretty much to handle the development
9 of the design. We understand that you're waiting on your
10 final hydrology report or final drainage report, whatever
11 the version is going to be called, to come up with your
12 final plans; and again, I think Soil and Water 8 addresses
13 that.

14 MS. FOLEY GANNON: Okay. Thank you.

15 HEARING OFFICER KRAMER: Okay. Basin and Range
16 Watch said no.

17 Questions? CURE?

18 MS. MILES: No questions.

19 HEARING OFFICER KRAMER: Burlington Northern?

20 MR. LAMB: No questions, sir.

21 HEARING OFFICER KRAMER: Anyone else?

22 None? Okay.

23 Ms. Miles, was Dr. Poff on this topic or the
24 other topic?

25 MS. MILES: Both topics.

1 HEARING OFFICER KRAMER: Okay.

2 MS. MILES: And I was wondering if we could take
3 a five-minute break before we go forward with examination
4 of Dr. Poff.

5 HEARING OFFICER KRAMER: Okay. We'll be back
6 at -- well, in five minutes.

7 (Recess.)

8 HEARING OFFICER KRAMER: Okay. I understand we
9 have a few people in the audience who wanted to make a
10 public comment. And we'll get to that after we finish
11 this first of the two water topics.

12 So, Ms. Miles, you were going to put on Dr. Poff?

13 MS. MILES: Yes.

14 HEARING OFFICER KRAMER: Am I pronouncing your
15 name correctly?

16 DR. POFF: Yes.

17 HEARING OFFICER KRAMER: And I don't think you
18 were sworn before, were you? So if you can raise your
19 right hand.

20 (Dr. Boris Poff was sworn.)

21 HEARING OFFICER KRAMER: Thank you. And you've
22 probably seen us getting really close to our microphones.
23 If you could do that, the folks in Sacramento would
24 certainly appreciate that.

25 DIRECT EXAMINATION

1 MS. MILES: Dr. Poff, whose testimony are you
2 sponsoring today?

3 DR. POFF: My rebuttal testimony with exhibits.

4 MS. HOLMES: Could you please speak up?

5 DR. POFF: Yes.

6 MS. MILES: And do you have any changes to your
7 sworn testimony?

8 DR. POFF: No.

9 MS. MILES: Are the opinions in your testimony
10 your own?

11 DR. POFF: Yes.

12 MS. MILES: Shall we have Dr. Poff summarize his
13 education and professional experience?

14 MS. FOLEY GANNON: We'll stipulate.

15 MS. MILES: Okay. At this time we will -- I just
16 want to note that the exhibits that we're referring to are
17 405 through 412.

18 Can you please briefly describe what it was that
19 CURE asked you to do in preparing for this project?

20 DR. POFF: CURE asked me to independently
21 evaluate the staff assessment and supplemental staff
22 assessment with the focus on soil and water resources and
23 all the applicant's additional testimony and filings
24 relating to soil and water resources. CURE also asked me
25 to analyze whether the proposed water supply for the

1 project was adequate.

2 MS. MILES: And can you just summarize your
3 primary concerns with the staff assessment?

4 DR. POFF: Staff acknowledged that it was relying
5 on limited soil data and did not include any analysis of
6 two environmental settings on the project site, namely
7 desert pavement and cryptobiotic soils. Conditions of
8 certification Soil and Water 3 defines specific methods
9 for design analysis, development of best management
10 practices, and monitoring the reporting procedures to
11 mitigate impacts relating to flooding, erosion,
12 sedimentation, stream channel changes. However, these
13 conditions of certification do not take into consideration
14 the potential increases in sedimentation and surface
15 runoff from damaged desert pavement and cryptobiotic
16 crusts.

17 MS. MILES: And why is having an understanding of
18 desert pavement and cryptobiotic crusts important?

19 DR. POFF: Both desert pavement and cryptobiotic
20 crusts have a significant influence on the hydrologic and
21 sedimentation processes because they stabilize the
22 underlying fine soil.

23 Desert pavement is created by the slow
24 accumulation of soil below the stone pavement. It takes
25 several thousand years for desert pavement to be created.

1 Research done just north of the project site has dated
2 desert pavement to be 7,000 years old. Often the
3 accumulated fine sands underneath the pavement can be
4 several meters deep; however, once the top layer is
5 disturbed by such as an activity as grading, it can erode
6 as quickly as one foot per decade. It may take millennia
7 before recovery processes may begin. We haven't been in
8 the Mojave Desert long enough yet to measure any kind of
9 recovery process from previous anthropogenic disturbances,
10 at least that I'm aware of.

11 And maybe we can see Figure 1?

12 HEARING OFFICER KRAMER: And this would come from
13 which exhibit?

14 MS. MILES: This is in the exhibits that I cited
15 before. I'm not sure which number.

16 HEARING OFFICER KRAMER: Okay. Well, we need to
17 be more specific than that so somebody reading the
18 transcript can look it up.

19 MS. MILES: Okay. One moment. I believe it was
20 Exhibit 405.

21 HEARING OFFICER KRAMER: And then more
22 specifically, does it have some kind of label or position
23 in Exhibit 405?

24 DR. POFF: Figure 1?

25 HEARING OFFICER KRAMER: Okay.

1 DR. POFF: This figure shows a road that was
2 created in the 1960s, 1970s just north of project site.
3 And there was desert pavement that was disturbed by this
4 small road, mining access road. And since then,
5 morphological changes, runoff has caused this road to
6 erode about four feet. And this just happened over about
7 50 or 40 years.

8 Can I see exhibit -- or Figure 2 from the same
9 exhibit?

10 This is just a side view. And you can see the
11 desert pavement, this is really fine -- well, desert
12 pavement are the rocks on top, and below is fine sand,
13 fine sediment that has accumulated, as I mentioned before,
14 over thousands of years. It's a rather delicate process.
15 And once this top surface, this top layer is disturbed,
16 you can see the effects in a very short time period.

17 Cryptobiotic crusts, which also happens to be on
18 the project site, are important members of the desert
19 ecosystem as well and contribute to the well-being of
20 other plants by stabilizing sand, dirt, providing moisture
21 retention, and fixing atmospheric nitrogen. Because of
22 their thin fibrous nature, cryptobiotic soils are also
23 extremely fragile systems.

24 Much of the pavements and crusts will be
25 destroyed through surface disturbances associated with the

1 project construction and operation. Once desert pavement
2 and crusts are destroyed, more sediment will flow into the
3 washes and blow in the air with significant unmitigated
4 impacts to air quality and water quality and degradation
5 of washes.

6 Further, erosion may trans from any given service
7 road in the project area into a new channel, as shown in
8 this figure, which will change drainage patterns, which
9 will change permutation patterns and consequently habitat.

10 MS. MILES: Could you please describe any
11 problems with the applicant's modeling effort used to
12 model the sedimentation?

13 DR. POFF: As far as I understand, the applicant
14 was relying on an NRCS model, and currently the NRCS is
15 doing a soil survey --

16 MS. MILES: I'm sorry. Could you tell me what
17 "NRCS" stands for?

18 DR. POFF: The National Resource Conservation
19 Service.

20 MS. MILES: Thank you.

21 DR. POFF: So this service is conducting a
22 mapping of the Mojave National Monument, which is --
23 Preserve, which is in the vicinity of the project site,
24 because it has not been done previously. And I happen to
25 be on the steering committee of this effort. And one

1 thing that was found early on is that the desert pavement
2 and cryptobiotic crusts have not been adequately
3 categorized and their effects not properly analyzed by the
4 NRCS. So any modeling effort that was done using their
5 model is inadequate because the input was inadequate, so
6 the output would be inadequate, too.

7 MS. MILES: Can you describe any concerns you
8 have with the applicant's plans for monitoring and
9 responding to storm events that could damage equipment or
10 cause environmental impact?

11 DR. POFF: Monsoon storms or summer storms in the
12 Mojave Desert are highly localized, high intensity in a
13 very short duration. A storm event with a hundred-year
14 event intensity can accrue over ten minutes over just a
15 few acres. Unless the project site is equipped with a
16 network of automated monitoring equipment, it would be
17 virtually impossible to determine what type of storm
18 event, one-year, ten-year, or above ten-year storm event
19 happen over the project site; hence, it is important that
20 SunCatcher units and fences, et cetera, are inspected
21 after every storm event that occurred on or upstream, in
22 the upstream vicinity of the project site.

23 MS. MILES: Thank you. Do you think after your
24 review of all of the applicant's and staff's documentation
25 that the project would substantially alter the existing

1 draining pattern of the site in a manner which would
2 result in erosion on site or off site?

3 DR. POFF: Yes, especially given the sensitivity
4 of the to-be-disturbed desert pavement I discussed earlier
5 and especially the size of the project area. I believe
6 the alterations will be substantial.

7 MS. MILES: In your opinion is it adequate to
8 defer the design analysis of the storm water and flooding
9 protection design plans until after project approval?

10 DR. POFF: No, because the impacts will be
11 significant, and we won't know if the mitigation will be
12 adequate prior to project approval.

13 MS. MILES: And do you have any other issues
14 you'd like to highlight?

15 DR. POFF: Yes, climate change.

16 Can I have from the same exhibit, Figure 3?

17 First let me state that both the applicant and
18 the staff have failed to account for the effects of
19 climate change on the project.

20 For one, increases in future summer storm
21 intensity and subsequent peaks and volumes will amplify
22 the project's impacts in terms of erosion, sedimentation
23 and channelization. Also decreases in winter
24 precipitation will reduce aquifer recharge by 50 percent
25 by the end of the century, if there's any, but we'll get

1 to that later.

2 So this figure right here shows climate change.
3 And what it shows is most of the last century, then
4 projected into the future. And this figure's accepted
5 from the International Climate Change Committee. And it
6 shows specifically for the American southwest. It shows
7 that just less water will be available for recharge and
8 other purposes simply because of the higher temperatures;
9 there will be increased evaporation and transpiration by
10 plants before the water can infiltrate into the ground.

11 Next figure, please, which will be Figure 4 from
12 the same exhibit.

13 And you see here, this is the hot spots of
14 climate change. Red indicates where climate change will
15 be -- will have the greatest impact. And you can see the
16 big red spot right over the project site, which just means
17 that that area will have the highest increase in
18 variability, we will have the highest increase in summer
19 storm activity and also maybe new droughts. This is
20 relevant for aquifer recharge.

21 And the last figure, please.

22 And this, the precipitation in the Mojave area,
23 very close to the project site for the past hundred-some
24 years, hundred and three or four years.

25 Next, please.

1 And you can see there was a drought in the 1930s.

2 Next.

3 And there was a drought in the 1950s.

4 And next.

5 There were some dry periods in the 19-teens.

6 Next, please.

7 And there was a really wet period in the 1940s.

8 Next, please.

9 However, the driest year on record by far, which
10 was two inches, and this is 30-some percent of normal, was
11 just this decade.

12 And next.

13 The most intense rainfall, precipitation events
14 were in that same decade, this decade, and that was
15 230-some percent of normal.

16 So you can see this is already happening.
17 Climate change is here, and it's here in the Mojave, the
18 desert is going to -- the regions where this climate
19 change will be experienced first. And it's already
20 happening.

21 MS. MILES: Thank you, Dr. Poff.

22 No further questions. This witness is available
23 for cross-examination.

24 HEARING OFFICER KRAMER: The applicant?

25 MS. FOLEY GANNON: Just one question.

1 CROSS-EXAMINATION

2 MS. FOLEY GANNON: The photos that you were
3 showing with the erosion associated with the road built
4 in -- was it 1960?

5 DR. POFF: 1960s, 1970s.

6 MS. FOLEY GANNON: Could you see, were there any
7 measures taken to address potential erosion associated
8 with construction of that road?

9 DR. POFF: Can you clarify that question, please?

10 MS. FOLEY GANNON: Many times when construction
11 activities are undertaken, there are measures that are
12 implemented to address storm water runoff and erosion and
13 other factors.

14 Were any of those types of measures implemented
15 associated with that road?

16 DR. POFF: I don't think those practices were
17 done at that time.

18 MS. FOLEY GANNON: Okay. Thank you.

19 No further questions.

20 HEARING OFFICER KRAMER: Basin and Range Watch?
21 Any questions?

22 They say no.

23 Burlington Northern.

24 MR. LAMB: No questions, sir.

25 HEARING OFFICER KRAMER: He says no.

1 Any other party?

2 No?

3 Thank you.

4 Oh, I'm sorry, staff? I forgot you.

5 MS. HOLMES: We feel forgotten; but no, we don't
6 have any questions.

7 HEARING OFFICER KRAMER: I'm pretty sure you
8 would have spoken up if you did.

9 MS. HOLMES: That's a good bet.

10 HEARING OFFICER KRAMER: That concludes the first
11 of the two water sub-topics then. And we had a couple of
12 public comment requests, one of which may turn out to want
13 to wait till later, but Commissioner Eggert?

14 COMMISSIONER EGGERT: Yes, thank you, Hearing
15 Officer Kramer.

16 And, Ms. Holmes, you're never forgotten, whether
17 here or in Sacramento.

18 Let's see. We have a couple of folks who wanted
19 to provide some comment, and we wanted to make sure to
20 give them the opportunity. So we have, I think first I'm
21 going to call Russ Blewett.

22 Is Russ here?

23 MR. BLEWETT: I'm here.

24 COMMISSIONER EGGERT: Welcome, Russ.

25 Russ is with the San Bernardino Planning

1 Commission.

2 And we very much appreciate you coming to join us
3 today and looking forward to your comments.

4 You'll have to put it right up --

5 MR. BLEWETT: By the way, welcome to the high
6 desert.

7 (Music played.)

8 MR. BLEWETT: Let's get ready to rumble.

9 COMMISSIONER EGGERT: That was beautiful.

10 MR. BLEWETT: Thanks. Couldn't beat the timing.
11 Well, you know where my attitude is. I like Rocky.

12 Anyway, first of all, welcome here. We brought
13 you -- we've provided you a beautiful week up here of
14 weather. A little hot, but -- especially if you're
15 coastal folks, but we like it.

16 I'd like to say how much -- wait a minute, I want
17 to turn this off.

18 I want you to know that, first of all, I'm the
19 county planning commissioner for the First District, which
20 by the way, is the largest planning district in the
21 United States; it goes from Cajon Pass, for any of you
22 that don't know where that is, and then it's about a
23 three -- a little over three-hour drive to the Nevada
24 border, and then it goes all the way down to 29 Palms, and
25 then all the way up to Inyo, Kern County. So it's a huge

1 district.

2 Unfortunately for us, about 84 percent of it is
3 controlled by the federal government. And that's
4 unfortunate in the fact that it only leaves us a tiny bit
5 of area to pay for police, fire, and the things that
6 government needs to provide to our people.

7 I want you to know that we support -- I support
8 the county's resolution that has been presented here
9 earlier, that we would much prefer to see an in lieu fee
10 program as opposed to -- as a form of mitigation as
11 opposed to providing a three-for-one mitigation of land.
12 That's totally unjustified. I think we have approximately
13 a million acres of proposed solar projects in the high
14 desert, which is a lot of them; and if we did that, and
15 they took three million acres of, worst-case scenario,
16 take three million acres of private sector land out of the
17 public domain, they would not leave us much land to
18 provide all the services that are needed in this county.
19 So I'd really appreciate if you give that some -- Fish &
20 Game needs to give that some thought.

21 Most of all, we need the renewable energy up
22 here. We have, obviously -- some people refer to us as
23 the Saudi Arabia of solar energy, which we probably are
24 because the lord provided us with an awful lot of sunshine
25 and an awful lot of days. And so this project I'm

1 particularly fond of because I like their technology,
2 because, of course, water is always a major issue up here
3 in our high desert.

4 And then I think most of all, something that you
5 may not be aware of, depending upon where you're from, we
6 all know the state has an unemployment problem, but the
7 high desert, particularly this area, has an incredible
8 one. Our unemployment rate is close to 20 percent up
9 here. And this economy's been devastated, particularly in
10 the construction industry, because as you go down into the
11 populated areas of Hesperia, Victorville, Apple Valley,
12 Adelanto, those areas were major construction areas. And
13 we have -- in that industry there's probably at least a
14 50-percent unemployment rate. So the 5- to 700 jobs that
15 this project would provide in construction would be an
16 incredible economic benefit to this area.

17 Now, I don't want to hurt turtles or, you know,
18 that's why the in lieu money should be used to protect the
19 habitat of whatever needs to be protected as opposed to
20 taking more land, because, my gosh, between the feds and
21 the state, there's already plenty of land that's already
22 under government control.

23 Anyway, thank you again for coming. We really
24 need -- we need projects like this one, because it's an
25 excellent project. And thank you again for your diligence

1 in being here.

2 COMMISSIONER EGGERT: Thank you very much,
3 Mr. Blewett. And we've been very pleased to have your
4 participation as well as the participation from some of
5 the other county officials. We had Mr. Newcomb here
6 yesterday and Mr. Silva on the first day.

7 MR. BLEWETT: And our county attorney.

8 COMMISSIONER EGGERT: Yep, Mr. Brizzee. And I
9 mentioned to those gentlemen, we see the partnership with
10 the locals as being critically important to pursuing and
11 implementing our policies in the state. So appreciate
12 your being here and providing that perspective.

13 MR. BLEWETT: Appreciate it.

14 COMMISSIONER EGGERT: The next person who's
15 indicated a desire to provide comment is
16 Mr. John D. Coffey, I believe, and is now -- would you
17 like to provide comment now? Does this work?

18 MR. COFFEY: With your permission, I would like
19 to speak later on after I've heard more testimony.

20 COMMISSIONER EGGERT: Okay. Why don't we wait
21 until then at that point, and then you'll have the benefit
22 of all the discussion, and we can hear from you.

23 MR. COFFEY: Thank you, sir.

24 COMMISSIONER EGGERT: Okay.

25 HEARING OFFICER KRAMER: And the testimony you're

1 speaking of is just the water topic or all of the topics?

2 MR. COFFEY: It will touch on a number of topics
3 besides the soil and water and the environmental impact.

4 HEARING OFFICER KRAMER: Okay. So it sounds as
5 if you should be at the end then, if you're willing to
6 wait until mid-afternoon or so.

7 MR. COFFEY: Yes, Mr. Chairman, I will.

8 HEARING OFFICER KRAMER: Okay. And for the
9 record, he says he's willing to wait until the afternoon.

10 Okay. Let's then continue with the water supply
11 topic.

12 MS. HOLMES: Hearing Officer Kramer, I just
13 wanted to let the parties know, if they haven't figured it
14 out already, that staff sent around a proposed condition
15 of certification to address the use of diesel generators.
16 This is a condition of certification that would be related
17 to air quality. So people should have received that by
18 now.

19 HEARING OFFICER KRAMER: And actually, the
20 applicant has passed out printed versions of that for our
21 convenience.

22 MS. HOLMES: Thank you.

23 HEARING OFFICER KRAMER: Okay. We'll get to that
24 later.

25 Staff, on the previous topic, is -- just to close

1 that out, a question occurred to me, does the uncertainty
2 you have because of the new information, is that resolved
3 in your opinion by the applicant's agreement to condition
4 of Soil and Water 8?

5 MS. HOLMES: Yes. I think we would have
6 preferred to have more information throughout this
7 process, but we do believe that Soil and Water 8 is
8 sufficient to allow us to conclude that we can ensure no
9 significant adverse impacts from erosion and flooding.

10 HEARING OFFICER KRAMER: Thank you.

11 So let's begin with the applicant's witnesses on
12 the water supply topic.

13 MS. FOLEY GANNON: The applicant calls
14 Robert Scott, who I believe is on the telephone.

15 Mr. Scott, are you on the phone?

16 MR. SCOTT: Yes, I am.

17 MS. FOLEY GANNON: How's Spain?

18 MR. SCOTT: Very hot.

19 MS. FOLEY GANNON: Probably not as hot as here.

20 We will also be calling --

21 MR. SCOTT: Actually, it's 110.

22 MS. FOLEY GANNON: We're also calling Joe Liles
23 as a witness on this panel.

24 Neither of these witnesses have been sworn.

25 HEARING OFFICER KRAMER: Okay. So if both of you

1 could raise your right hand.

2 (Robert Scott and Joe Liles were sworn.)

3 HEARING OFFICER KRAMER: Thank you. Go ahead.

4 MS. FOLEY GANNON: Thank you.

5 DIRECT EXAMINATION

6 MS. FOLEY GANNON: Mr. Scott, we'll start with
7 you.

8 Are you the same Robert Scott who presented
9 written testimony in these proceedings which have been
10 marked Exhibit 77 and Exhibit 84?

11 MR. SCOTT: Yes, I am.

12 MS. FOLEY GANNON: And is a resume that is
13 attached to that written testimony still accurate and
14 correct?

15 MR. SCOTT: Yes, it is.

16 MS. FOLEY GANNON: And do you have any
17 corrections or revisions to make to the testimony that you
18 presented?

19 MR. SCOTT: We've included an additional map of
20 wells, Exhibit 84A.

21 MS. FOLEY GANNON: That was attached -- yes, that
22 was attached to your rebuttal testimony, which is
23 Exhibit 84?

24 MR. SCOTT: Oh, correct.

25 MS. FOLEY GANNON: All right. Thank you.

1 No other additions or corrections to make to your
2 testimony?

3 MR. SCOTT: No.

4 MS. FOLEY GANNON: All right. Mr. Scott, can you
5 describe the role that you have played in the Calico
6 project?

7 MR. SCOTT: We have served in the capacity of
8 evaluating water supply, availability to support the
9 project.

10 MS. FOLEY GANNON: And can you briefly summarize
11 your conclusions about the water supply, how that will be
12 satisfied, provided for the project?

13 MR. SCOTT: Earlier this year we embarked on a
14 water supply investigation, and we installed two potential
15 water supply wells. The well was -- that would be used
16 for the project is called Well 3. We conducted an aquifer
17 test to the well. And we found that -- we pumped it for a
18 period of 24 hours at a rate of 150 gallons a minute, and
19 we found that there was about, a little bit over six feet
20 of drawdown during the test. And the drawdown of six feet
21 occurred within a minute into the test and maintained that
22 level throughout the remainder of the test. And then when
23 we turned the pump off and allowed the water levels to
24 recover, they recovered almost instantaneously.

25 Based on these results, we did some analytical

1 calculations and evaluated the cone of -- the zone of
2 influence and the radius of influence related to pumping,
3 and we concluded that there would be no significant impact
4 of pumping on the aquifer as a result of providing water
5 supply for the project.

6 MS. FOLEY GANNON: So in summary, you say that
7 when you began pumping, you saw a drawdown of six feet.
8 What does that -- what information does that give you
9 about the aquifer?

10 MR. SCOTT: It allows us to do some calculations
11 to evaluate the transmissivity. And through that we can
12 project what the drawdown might be at certain time periods
13 through the testing.

14 MS. FOLEY GANNON: And the fact that it --

15 MR. SCOTT: Through operations. I'm sorry.

16 MS. FOLEY GANNON: And the fact that it remained
17 at six feet through the remainder of the 24 hours, what
18 did you conclude from that result?

19 MR. SCOTT: Well, we felt that the well is
20 very -- the results were very favorable that this well can
21 provide a reliable supply of water for the project during
22 construction and its operation.

23 MS. FOLEY GANNON: And can you describe the basin
24 over which this well is located?

25 MR. SCOTT: It's -- the well is located in the

1 Lavic Lake Basin. The Lavic Lake Basin is part of the
2 Colorado River Hydrologic Basin. And it's 159 square
3 miles. It has -- it's been estimated that it has 270,000
4 acre feet of storage and that the recharge is estimated at
5 about 200 to 400 acre feet a year. And staff came up with
6 a similar conclusion in the supplemental staff assessment
7 with respect to recharge. So the amount of water that we
8 will be using will just be a small fraction of the water
9 that's recharged each year.

10 MS. FOLEY GANNON: And what is the amount of
11 water that's required for the project during construction?

12 MR. SCOTT: It's approximately 136 acre feet a
13 year for the first five years, and then operations is
14 about 20 acre feet or 12 and a half gallons a minute,
15 which is a relatively small amount of water.

16 MS. FOLEY GANNON: And the test- -- and the
17 aquifer testing, which we were just discussing a moment
18 ago, did that give you information as to whether this well
19 will be able to produce these amounts?

20 MR. SCOTT: Yes. We -- based on our evaluation,
21 the well can provide the water that's needed for the
22 project, both in construction and throughout its long-term
23 operation.

24 MS. FOLEY GANNON: And in reviewing the potential
25 impacts associated with using the water from this well,

1 did you consider whether there were any other users who
2 were in the vicinity who are also relying on this aquifer?

3 MR. SCOTT: We did an extensive survey of wells
4 within the basin, and there are no other users currently
5 in the basin that we have identified.

6 MS. FOLEY GANNON: There were no other wells that
7 are relying on this basin at this time is your
8 understanding?

9 MR. SCOTT: That's correct.

10 MS. FOLEY GANNON: And in assessing the
11 availability of this supply, I understand that this was --
12 this was called Well 3 because it was the third well that
13 you looked at; is that correct?

14 MR. SCOTT: It's actually the third boring that
15 was drilled, yes.

16 MS. FOLEY GANNON: And can you describe the
17 results from the drilling or the testing that was done in
18 Well 1 and 2?

19 MR. SCOTT: Well 1 -- Well 1 was the first boring
20 drilled earlier this year, and there were a number of
21 complications that were encountered during drilling. One
22 issue was that the mud remained in the bore hole for many
23 weeks, and we believed that a -- Joe, are you there?

24 MS. FOLEY GANNON: You're right, I will talk --
25 discuss further with Mr. Liles the actual drilling that

1 was done.

2 I guess what I'd like to have you speak to is I
3 understand that these wells did not produce at a level
4 that would indicate there was a reliable water supply at
5 either of those wells; is that correct?

6 MR. SCOTT: This is correct.

7 MS. FOLEY GANNON: And does that influence your
8 assessment about the reliability of the supply available
9 through Well 3?

10 MR. SCOTT: No, it does not. As I indicated,
11 Well 1 was improperly installed, and we believe it's
12 through that installation that the well resulted in having
13 a very low production rate. With Well 2, when we had done
14 a geophysical log, it didn't look particularly favorable,
15 and so we didn't complete it as a well.

16 MS. FOLEY GANNON: So based on your professional
17 judgment, do you conclude that the project has identified
18 a reasonably reliable water supply for the project?

19 MR. SCOTT: Yes. I believe they have. You know,
20 geology, it can be variable, and the -- yes, geology it
21 can be variable, and in some -- you know, there could be
22 instances where drilling occurs and a suitable horizon
23 isn't encountered but could be encountered elsewhere.

24 MS. FOLEY GANNON: Thank you, Mr. Scott.

25 Have you reviewed the supplemental staff

1 assessment that was prepared for this project?

2 MR. SCOTT: Yes, I have.

3 MS. FOLEY GANNON: And do you agree with the
4 analysis included therein?

5 MR. SCOTT: In general, I do agree with it, but
6 there are a number of issues that I'd like to provide some
7 input and recommendations.

8 MS. FOLEY GANNON: Please go ahead.

9 MR. SCOTT: For instance, with condition Soil and
10 Water Number 7, we would like to as a monitoring network
11 use the existing wells at the site. There's Well 1,
12 Well 3, the Shrager well, and another well that will be
13 installed for monitoring purposes. We believe that
14 Well 3, being that it's a pumping well, will tell us the
15 most about what sort of effects there may be on the
16 aquifer, so we believe that that will be suitable for
17 monitoring the zones that are penetrated by the well.

18 MS. FOLEY GANNON: I also note that the applicant
19 is suggesting that there not be monitoring of the lower
20 Mojave Groundwater Basin. Can you describe the reason for
21 that request?

22 MR. SCOTT: Yeah. The Pisgah Fault separates the
23 Lavic Valley Basin from the lower Mojave, and the
24 Department of Water Resources and the USGS have indicated
25 that it's believed that the Pisgah Fault is a barrier to

1 groundwater flow. And in such an instance, and based on
2 the testing results, we don't believe that a cone, or the
3 radius of influence will extend to anywhere near the
4 fault. And being that it's a barrier, there would be no
5 extension of groundwater effects in that area.

6 The lower Mojave Basin is in overdraft, and it's
7 currently in a state of declining water levels, and
8 it's -- the Mojave water agency serves as the water
9 master, and the well -- the basin is extensively
10 monitored. And with the extraction of on the order of
11 39,000 acre feet a year compared to the small amount that
12 we'll be drawing from the Lavic Lake Basin, even if there
13 weren't a boundary there, it would be very difficult if
14 even possible to distinguish any drawdown effects that
15 Well Number 3 would have on wells in the lower Mojave
16 Basin.

17 MS. FOLEY GANNON: And where is the Pisgah Fault
18 identified?

19 MR. SCOTT: The Pisgah Fault runs in a
20 northwest-southeast direction approximately six miles west
21 of the site.

22 MS. FOLEY GANNON: And your conclusion that it
23 acts as a barrier between these two groundwater basin is
24 based on what?

25 MR. SCOTT: Based on information that the USGS

1 and GWR have identified. There's been indications that
2 there's a difference in water levels on either side of the
3 fault.

4 MS. FOLEY GANNON: So is it your suggestion that
5 monitoring the lower Mojave Groundwater Basin would not
6 provide meaningful information about the impact of the
7 project on groundwater supplies?

8 MR. SCOTT: Yes, this is true.

9 MS. FOLEY GANNON: Thank you.

10 I also note that there was a proposed revision to
11 Soil and Water 9. Are you familiar with that?

12 MR. SCOTT: Yes, I am. And there was statements
13 in the condition of having to cease the use of the well if
14 changes in water levels are observed that there's some
15 accelerated drawdown. And we would just like to see it --
16 there may be instances where the well may need to be
17 rehabilitated during the project. And rather than turning
18 off the well, be able to reschedule mirror washing to
19 avoid any kind of delays. And there wouldn't be any need
20 to cease mirror washing completely or to switch to an
21 alternative water supply.

22 MS. FOLEY GANNON: And there's also suggested
23 language about identifying a backup water supply from the
24 Cadiz Groundwater Basin. Can you describe that change?

25 MR. SCOTT: Excuse me. I didn't catch that.

1 MS. FOLEY GANNON: There had been a suggestion by
2 staff that there was a need to identify a potential backup
3 water supply. And the applicant has suggested language to
4 put in here that that would be from the Cadiz Groundwater
5 Basin.

6 Can you speak to that suggested change?

7 MR. SCOTT: Yes. We'd just like the opportunity
8 to use -- make that language change to the condition.

9 MS. FOLEY GANNON: Again, do you feel that --
10 based on your professional judgment you believe though
11 that the water supply that is proposed by the applicants
12 is reasonably likely to be available for the life of the
13 project; is that correct?

14 MR. SCOTT: Yes, we do. But, you know, in any
15 circumstance it's always good to have a backup well,
16 particularly if you've got well rehabilitation or any kind
17 of work that needs to be done on the well, at least you
18 have a backup supply.

19 MS. FOLEY GANNON: Thank you, Mr. Scott.

20 Turning now to Mr. Liles, are you the same
21 Joe Liles who submitted testimony in this proceeding which
22 is currently marked as Exhibit 85?

23 MR. LILES: Yes, I am.

24 MS. FOLEY GANNON: And is the resume that is
25 attached to your written testimony still accurate and

1 correct?

2 MR. LILES: Yes, it is.

3 MS. FOLEY GANNON: And do you have any
4 corrections or revisions to make to your written
5 testimony?

6 MR. LILES: No, I do not.

7 MS. FOLEY GANNON: And can you describe the role
8 that you have played with regard to the Calico project?

9 MR. LILES: Very similar to Bob in the fact that
10 I was involved with installation and drilling processes
11 for Well Number 1, 2, 3. I oversaw the aquifer testing,
12 the analysis with regard to Well Number 3.

13 MS. FOLEY GANNON: And can you briefly summarize
14 again the results that you saw from this testing?

15 MR. LILES: Yes. Well Number 3, we did an
16 aquifer test that was 24 hours in length. We pumped the
17 well at a hundred gallons a minute. We had about 6.6 feet
18 of drawdown. That occurred within the first minute of
19 pumping. It remained stable for the remainder of the
20 test. At the end of the test, the well recovered within
21 the first 30 seconds, almost instantaneously.

22 We drew down about one percent of the total water
23 column. The total water column for that well is 800 feet.
24 With the screen at about 552 feet, we have about 200 feet
25 of water column above that, which we could draw down, so

1 we drew down about three percent of that.

2 For a typical municipal production well, water
3 columns can be drawn down 50 to 75 percent. And this test
4 was also conducted in the same design as a municipal water
5 well, production well would be done.

6 This well was very transmissive. For this well,
7 it should produce enough water for this project. I feel
8 confident that it would do that.

9 MS. FOLEY GANNON: And when you're making the
10 calculation about how much you think a well could produce,
11 what is that; just in summary, for those of us who are not
12 experienced in that, how do you make that determination?

13 MR. LILES: There's different ways of doing it.

14 Based on this one, we used specific capacity,
15 which it's -- it's the drawdown, or the initial drawdown,
16 or the initial water level and the final water level, that
17 change there between the two at the end of a test.

18 And basically the specific capacity for the well
19 was about 15.15 I believe is what we calculated it at, and
20 then we used that to calculate out the transmissivity. We
21 did it based on unconfined aquifers and confined aquifers.
22 I have the calculation if you need to know exactly what it
23 is.

24 MS. FOLEY GANNON: And when you're considering
25 the reliability of the water supply and its ability to

1 satisfy the needs of the project, are you also looking at
2 the amount that you need to be able to produce sort of on
3 a gallons per minute or a gallons per day to make sure
4 that it can provide it adequately?

5 MR. LILES: Yes. And when we conducted this
6 test, we conducted the test at a hundred gallons a minute.
7 The project for the construction is only -- only needs
8 about 83 during construction. So we had -- would erred on
9 the side of caution when we did the pumping test.

10 And then during the long-term operations, it's
11 only needed about 12.5 I believe is what it was. Again,
12 we pumped this well at a hundred gallons per minute with
13 very minimal drawdown.

14 MS. FOLEY GANNON: And have you had experience in
15 other cases where you installed the test well to make
16 determinations about the potential availability of a water
17 supply?

18 MR. LILES: Yes, I have.

19 MS. FOLEY GANNON: And based on that experience
20 and the results that you see here today, again, can you
21 give us your conclusion about the availability of this
22 water supply?

23 MR. LILES: The results were very favorable. We
24 did not see any issues with barriers or anything else
25 during this test. The well produced adequately for what's

1 going to be required for this project.

2 MS. FOLEY GANNON: And Mr. Scott made a reference
3 to the fact that Well 1 did not produce largely because of
4 the way it was installed. Can you speak further to that
5 issue?

6 MR. LILES: Yeah. There's two different issues
7 that arose from Well Number 1. Well Number 1 was
8 installed with mud rotary drilling technique. During the
9 drilling of this well, they -- the well was drilled down
10 to about 802 feet. During the drilling they ended up --
11 the driller had to re-drill the hole, the boring three
12 times because of collapses or whatever else during
13 construction. So finally when the well was constructed,
14 the time duration we're talking about from the beginning
15 to the end was a few months, they constructed the well.
16 The mud infiltration into the aquifer basically would plug
17 up the aquifer.

18 So when the well was finally constructed, there
19 was 40 to 50 feet of mud in the bottom of this hole, and
20 this hole had screened interval of about a hundred feet,
21 so almost half of the screen interval had mud that was
22 just very compacted in there and basically out in the
23 formation also.

24 The other thing with Well Number 1, the
25 difference between Well Number 1 and 3 is the

1 construction. Well Number 1 was constructed to 802 feet.
2 Well Number 3 was constructed to 1147 feet. The
3 difference is in the bottom zone, the 1047 to 1147,
4 there's a highly-permeable zone down in that that was
5 identified during the geophysical logging.

6 So in combination of the two, both with the well
7 construction being difficult as well as the well
8 construction being different between Well Number 1 and 3,
9 that's the difference between those two.

10 MS. FOLEY GANNON: Again, so does that change
11 your assessment about the reliability of Well Number 3 and
12 the ability to draw from this basin and adequate water
13 supply?

14 MR. LILES: Not whatsoever.

15 MS. FOLEY GANNON: And what happened with Well
16 Number 2?

17 MR. LILES: Well Number 2 was drilled quite a
18 distance away from Well Number 1 and Well Number 3. And
19 Well Number 2, again, drilling took a while with the
20 driller that was drilling Well Number 2. Well Number 1
21 and 2 were drilled by the same drilling company. Well
22 Number 3 was drilled by a different company.

23 Well Number 1 -- I'm sorry, Well Number 2 also
24 took a considerable duration to do the drilling. When we
25 did geophysical logging, there didn't appear to be very

1 permeable zones significant enough to what we thought
2 would be supplying enough water for the project, so we
3 decided at that point not to construct Well Number 2.
4 There was permeable zones, but just didn't appear to be as
5 permeable as, you know, we needed for the project.

6 MS. FOLEY GANNON: And have you had an
7 opportunity to review the supplemental staff assessment?

8 MR. LILES: Yes, I have.

9 MS. FOLEY GANNON: And do you agree with the
10 conclusions and the analysis contained therein?

11 MR. LILES: Yes, with the exception of a couple
12 of items which Bob did speak about. One is in the
13 construction -- I'm sorry, in installation of another wall
14 to do monitoring. We'd like that changed. We would like
15 to use Well Number 3 for the monitoring. It's the most
16 appropriate well to be used.

17 MS. FOLEY GANNON: Well Number 3?

18 MR. LILES: Well Number 3 for the monitoring.

19 MS. FOLEY GANNON: Isn't Well Number 3 the supply
20 well?

21 MR. LILES: Yes, it is.

22 MS. FOLEY GANNON: And that can also be the
23 monitoring well?

24 MR. LILES: Yes, it can.

25 MS. FOLEY GANNON: And are there any permits that

1 you need to be able to use this well as the production
2 well rather than as a test well?

3 MR. LILES: Yes, there is.

4 MS. FOLEY GANNON: And have efforts been
5 undertaken to get that permit?

6 MR. LILES: Yes, there have. In fact, we've been
7 speaking with the county. They have all the information
8 together with the exception of there was some
9 documentation that needed to be signed by a geologist that
10 works at the county. I guess there's -- he's been sick,
11 so he has not been able to review and/or sign the
12 documentation. We have a meeting on Tuesday to switch
13 that well over from a test well to a production well. All
14 the paperwork is in order at this point, it's just the
15 signature and paying of a fee.

16 MS. FOLEY GANNON: So, again, it's your
17 understanding they have all the information they need?

18 MR. LILES: Yes.

19 MS. FOLEY GANNON: Excellent.

20 These witnesses are available for
21 cross-examination.

22 HEARING OFFICER KRAMER: Staff?

23 MS. HOLMES: Thank you. I have I think just
24 three questions for Mr. Scott.

25 ///

CROSS-EXAMINATION

1
2 MS. HOLMES: Mr. Scott, has the hydraulic
3 connection across the Pisgah Fault -- would lack of
4 hydraulic connection across the Pisgah Fault been
5 quantified?

6 MR. SCOTT: No, not that I'm aware of.

7 MS. HOLMES: And what analysis did you include in
8 your testimony on the radius of influence?

9 MR. SCOTT: We calculated the radius of influence
10 for both an unconfined and a confined aquifer. And we
11 plotted out the one- -- the one-foot change in drawdown.
12 And we found for an unconfined aquifer, the extent of the
13 radius would be on the order of potentially 1900 feet.
14 And for a confined aquifer, I think it was on the order of
15 19,000 feet.

16 We believe the aquifer is an unconfined aquifer
17 because the water level and the existing Shrager well are
18 very similar to the two wells that we drilled that
19 penetrate into deeper zones. And so those were our
20 findings.

21 MS. HOLMES: Thank you.

22 And do you believe it's appropriate to limit a
23 potential alternative water supply to solely the Cadiz
24 Groundwater Basin?

25 MR. SCOTT: To limit it to Cadiz?

1 MS. HOLMES: That does appear to be the effect of
2 your proposed modification to Soil and Water 9.

3 So I'm asking you if you agree that it's
4 appropriate to limit it to water from Cadiz Groundwater
5 Basin.

6 MS. FOLEY GANNON: Ms. Holmes, maybe we can help
7 clarify that point.

8 That was a suggestion, because that's where we
9 anticipate the backup supply to be. If staff wants to
10 have it broader, we will stipulate to that.

11 MR. SCOTT: Right.

12 MS. HOLMES: Thank you.

13 Those are all my questions.

14 MR. SCOTT: Thank you.

15 HEARING OFFICER KRAMER: Basin and Range Watch?

16 CROSS-EXAMINATION

17 MR. EMMERICH: Okay. I just had a brief question
18 on mirror washing, specifically on the frequency of it.

19 Like how -- I don't see in the final SSA anything
20 listed on how often you're going to be using water to
21 mirror wash. Can you elaborate on that?

22 MS. FOLEY GANNON: These witnesses --

23 MR. SCOTT: It's not something that I can
24 specifically speak to. It would have to be someone at
25 Tessera.

1 MS. FOLEY GANNON: These witnesses are
2 actually --

3 MR. EMMERICH: I apologize for that.

4 MS. FOLEY GANNON: Okay. Thank you.

5 HEARING OFFICER KRAMER: Is that something you
6 want to try to get answered later though?

7 MS. FOLEY GANNON: Ms. Bellows can provide an
8 answer if we want to just answer the question now.

9 HEARING OFFICER KRAMER: Sure, please go ahead.

10 (Felicia Bellows was previously sworn.)

11 MS. BELLOWS: In terms of all overall water usage
12 at the site during operations, our expectation is up to
13 20 acre feet per year, and most of that water is for the
14 dishwashing. So we'll be washing our dishes basically
15 approximately every four to five weeks. You basically
16 start at one end and go to the other end of the field and
17 start over.

18 MR. EMMERICH: Okay. I have -- if it's every
19 four to five weeks, I'm just wondering, there are --
20 there's other facility in the desert that have reported --
21 like solar facilities, like parabolic trough systems,
22 Harper Lake, Kramer junction, there's some proposed ones
23 by the applicant Solar Millennium that they're suggesting
24 that they're going to wash their mirrors every week, maybe
25 twice a week during the summer months. And I'm wondering,

1 do you think there will be more dust events or wind events
2 that's going to accumulate more particulates on the
3 mirrors other than five times a year?

4 MS. BELLOWS: The Solar Millennium facilities use
5 a different technology. So, you know, I can't really
6 address that. I believe their needs are a little bit
7 different than ours.

8 So our expectation, based on the -- you know, we
9 do have a Met station out in the area collecting both wind
10 and sun information, and before that we were basing it off
11 the Daggett location, which is fairly close. So based on
12 those indications, this is the amount of washing that
13 we'll be needing to do.

14 MR. EMMERICH: Okay. Thank you.

15 HEARING OFFICER KRAMER: Are your machines less
16 sensitive to deposits on the mirrors than perhaps the
17 troughs, or do you know at all?

18 MS. BELLOWS: Well, remember, trough has a liquid
19 that they need to heat, right? So ours -- that's one of
20 the things, quite honestly, that we want to explore over
21 time, is if we can even get by with less than that.

22 So again, our expectation, based on what we know
23 today and our experience at other sites, is that's what
24 will be needed to do. But it will be interesting to see
25 if we can even get by with less water and have less

1 degradation in terms of results.

2 HEARING OFFICER KRAMER: But then it sounds as if
3 you're pretty confident that you won't have to wash more
4 frequently.

5 MS. BELLOWS: That's correct.

6 HEARING OFFICER KRAMER: CURE?

7 CROSS-EXAMINATION

8 MS. MILES: And this is follow up to Ms. Bellows.
9 And what is your basis for concluding that you're
10 confident that you won't need to wash more frequently?

11 MS. BELLOWS: It's based on our experience at
12 Sandia with the dishes that we've had there for some time
13 now. In addition, our experience at Maricopa, and then
14 using the actual weather that we know exists in the area.

15 MS. MILES: And have you done any monitoring of
16 the amount of dust in the area?

17 MS. BELLOWS: What we've done is wind analysis
18 that's come off of the Met station.

19 MS. MILES: Thank you.

20 I have a question for Mr. Liles.

21 First I wanted to clarify, did you -- I believe
22 you might have misspoken about the amount of water needed
23 for construction. Did you say 83 acre feet per year?

24 MR. LILES: No, no, no. It's 83 gallons a
25 minute. It's 136 acre feet a year.

1 MS. MILES: Okay. Thank you.

2 MR. LILES: Yeah.

3 MS. MILES: And I had a question. Is there any
4 possibility that Well Number 3 will need to be modified to
5 meet the water supply requirements for the project now or
6 in the future?

7 MR. LILES: As far as what? I guess --

8 MS. MILES: I mean, would there need to be any,
9 like, construction modification to the well?

10 MR. LILES: Currently right now if we went out,
11 we could pump the well as it stands right now with
12 plugging it into power basically. So as I know, no, it
13 doesn't need anything at this point.

14 MS. MILES: And that would be -- and do you
15 anticipate that there might need to be any
16 construction-type modifications to the well throughout the
17 life of the project?

18 MR. LILES: I don't know that. I don't have an
19 answer for that. I'm not sure what the construction's
20 going to be with what's going to go on out there. I know
21 currently it meets the county requirements for a
22 production well. All it would need at this point now is
23 power.

24 MS. MILES: Okay. And I'm not sure who direct
25 this question to, but I'm curious to know whether the

1 applicant has a contract for backup water supply with
2 Cadiz.

3 MS. BELLOWS: We do not have that at this point,
4 although we have two parties who have approached us about
5 that.

6 MS. MILES: Okay. Thank you.

7 No further questions.

8 HEARING OFFICER KRAMER: Thank you.

9 Burlington Northern?

10 CROSS-EXAMINATION

11 MR. LAMB: Thank you. Steve Lamb for Burlington
12 Northern.

13 Mr. Scott, have you done any analysis or testing
14 to determine what the impact of groundwater pumping from
15 Well Number 3 will be in relation to subsidence on the
16 project site or surrounding area?

17 MR. SCOTT: No, we have not; but from what I
18 understand, is that the applicant will be conducting
19 monitoring in the area.

20 MR. LAMB: Do you know what methodology will be
21 employed to do that monitoring?

22 MR. SCOTT: No, I don't.

23 MR. LAMB: Now, you mentioned earlier that there
24 were no other active users within the particular basin.
25 Are you familiar with the fact that BNSF has a water well

1 that's not currently being used at the Hector Road site?

2 MR. SCOTT: I understood that it had been
3 abandoned, unless that's a different well.

4 MR. LAMB: What's your definition of "abandoned"?

5 MR. SCOTT: That it's been plugged and it's not
6 being used.

7 MR. LAMB: Okay. You understand that there's
8 different requirements for abandonment within the Regional
9 Water Quality Control Board versus whether it's just been
10 plugged and not used?

11 MR. SCOTT: I mean, I understand that when you
12 have a well and that you're going -- it needs to be
13 properly abandoned in accordance with the California
14 Department of Water Resources guidelines.

15 MR. LAMB: Okay. And it's your belief that that
16 well has been abandoned?

17 MR. SCOTT: That's what I understood in talking
18 with some staff at BNSF.

19 MR. LAMB: Okay. Do you have --

20 MR. SCOTT: I may be confused; maybe there is
21 another well, but I'm not aware of that.

22 MR. LAMB: Do you have an understanding one way
23 or another whether or not if that well were operated or
24 another well in the vicinity were operated whether that
25 would impact your ability at Well Number 3 to supply water

1 to your site?

2 MR. SCOTT: I would say that that's probably
3 pretty unlikely being that we have such a tall water
4 column within our well and we saw such a limited amount of
5 drawdown during our aquifer test.

6 MR. LAMB: Okay. In relation to that, sir, have
7 you done anything to determine what the annual recharge
8 rate is for the particular aquifer?

9 MR. SCOTT: No, we have not calculated that,
10 although I understand that staff at the CEC have --

11 MR. LAMB: Okay. Thank you.

12 MR. SCOTT: -- spoken with individuals at the
13 USGS that have calculated recharge for the basin.

14 MR. LAMB: Okay. Thank you.

15 I have no further questions.

16 HEARING OFFICER KRAMER: Thank you.

17 Any other parties?

18 No?

19 Redirect?

20 MS. FOLEY GANNON: No redirect.

21 HEARING OFFICER KRAMER: Okay. Ms. White has one
22 question.

23 MS. WHITE: This is for the applicant.

24 When you talk about the barrier of the Pisgah
25 Fault, is that the same as saying that there's no

1 hydrologic connectivity between the basin?

2 MS. FOLEY GANNON: I think that's --

3 MR. SCOTT: This is Mr. Scott. Yes, that's
4 correct.

5 MS. WHITE: Okay. So but your answer then to
6 staff was that you hadn't actually measured the
7 connectivity, so it was the assumption --

8 MR. SCOTT: No, it's not something that's been
9 measured; it's something that the USGS and the Department
10 of Water Resources have hypothesized --

11 MS. WHITE: Okay. So based on the hypotheses --

12 MR. SCOTT: -- based on water levels.

13 MS. WHITE: Okay. So based on the hypotheses,
14 you're considering that those two basins are not at all
15 connected, correct?

16 MR. SCOTT: Well, that's true. And the reason --
17 the water -- the groundwater in the Lavic Lake Basin is
18 part of the Colorado River hydrologic unit, and it's been
19 designated so by the -- by the state water resources
20 control board, and the lower Mojave is part of the south
21 Lahontan hydrologic basin.

22 MS. WHITE: Okay. So percolation is then the
23 only source of recharge?

24 MR. SCOTT: And there may be some degree of flow
25 from one basin to the next --

1 MS. WHITE: Which basin are you talking about?

2 MR. SCOTT: -- in a west-east direction.

3 MS. WHITE: In a westerly direction? So isn't
4 that the Mojave --

5 MR. SCOTT: No. In a west to east direction,
6 sort of stair step.

7 MS. WHITE: So, okay. I'm confused now. Then
8 that would suggest the Mojave is connected past the
9 Pisgah Fault.

10 MR. SCOTT: I think I mean that from the Lavic
11 Lake Basin to the east to Broadwell Valley and the other
12 basin and the Colorado basin.

13 MS. WHITE: I'm still confused, but -- okay.
14 Never mind.

15 MS. FOLEY GANNON: Mr. Scott, were you trying to
16 state that you believe there may be some connection
17 between the Lavic basin and the basins, you just
18 referenced their names, and I'm sorry, I didn't capture
19 them all, to the east?

20 MR. SCOTT: Yeah, Broadwell Valley Basin and then
21 Bristol Lake Basin --

22 MS. FOLEY GANNON: So you're saying --

23 MR. SCOTT: -- and that --

24 MS. FOLEY GANNON: -- there may be some
25 interchange both east and west between those basins?

1 MR. SCOTT: No. The water would flow from one to
2 the next in that direction, from west to east.

3 MS. FOLEY GANNON: All right. Thank you.

4 HEARING OFFICER KRAMER: Okay. Do you want
5 Mr. Scott to stick around to hear the other testimony?

6 MS. FOLEY GANNON: I'm willing to release
7 Mr. Scott.

8 HEARING OFFICER KRAMER: Okay. Does anybody have
9 any final questions for Mr. Scott?

10 Okay. Hearing none, Mr. Scott, go out in the
11 heat, I guess. Thank you.

12 MR. SCOTT: Headed out for Tapas.

13 MS. FOLEY GANNON: Thanks, Bob.

14 MR. SCOTT: Thank you.

15 HEARING OFFICER KRAMER: Rub it in.

16 Okay. Staff, your witnesses?

17 MS. HOLMES: Thank you.

18 Staff's witnesses on water supply are Gus Yates
19 and John Fio. I believe they need to be sworn.

20 HEARING OFFICER KRAMER: Okay. And while we're
21 at it, let's see. Do we have anyone else?

22 No.

23 Okay. Gentlemen, raise your right hand.

24 (Gus Yates and John Fio were sworn.)

25 HEARING OFFICER KRAMER: Thank you.

1 Go ahead, Ms. Holmes.

2 MS. HOLMES: Thank you.

3 DIRECT EXAMINATION

4 MS. HOLMES: Panel witnesses, did you prepare the
5 water supply sections of Exhibit 300?

6 MR. FIO: Yes, we did.

7 MR. YATES: Yes.

8 MS. HOLMES: And were statements of your
9 qualifications included in Exhibit 300?

10 MR. FIO: Yes, they were.

11 MS. HOLMES: And are you also sponsoring the
12 revision that's been identified as Exhibit 306 replacing
13 Soil and Water Figure 5 with 5A and 5B?

14 MR. FIO: Yes.

15 MS. HOLMES: Are the facts contained in your
16 testimony true and correct to the best of your knowledge?

17 MR. FIO: Yes.

18 MS. HOLMES: And do the opinions represent your
19 best professional judgment?

20 MR. FIO: Yes.

21 MS. HOLMES: Since we're having so much
22 difficulty changing mics here, I think what I'm going to
23 do at this point is simply turn it over to the witnesses.

24 What I'd like Mr. Fio and Mr. Yates to do is
25 respond to the applicant's refiled testimony and oral

1 testimony today regarding the proposed changes to soil and
2 water conditions of certification 7 and 9.

3 MR. FIO: Yes. This is John Fio speaking.

4 In regards to Soil and Water 7, the applicant --
5 the applicant is requesting that we remove reference to
6 the Mojave Basin And basically the intent of Soil and
7 Water 7 was not for the project owner to construct and
8 actively monitor wells west of the fault, but instead it
9 was to assemble relevant data that is already being
10 collected as part of the Mojave Basin monitoring
11 activities and to include that data in the required
12 monitoring reports.

13 So although staff's assessment indicated that
14 there's a limited connection between drawdown -- pumping
15 drawdown in the Lavic Valley and the Mojave Basin, that we
16 still believe that monitoring from the lower Mojave
17 groundwater basin is necessary because water levels are
18 falling in the Mojave Basin.

19 So there is an exchange there where not only
20 could there be an impact from excessive drawdown in the
21 Lavic Valley, but the continued drawdown within the Mojave
22 Basin can also eventually impact the Lavic Valley, so we
23 are requesting that that be retained within Soil and
24 Water 7, that any available monitoring data that's been
25 collected in the Mojave -- lower Mojave Basin be included

1 as part of the reporting procedures.

2 And then a second issue in Soil and Water 7 was
3 the applicant was asking to strike some wording in terms
4 of -- basically to strike the words "mediate" and replace
5 it with "reduce." The -- oh, that's Soil and Water 9, I'm
6 sorry.

7 Number of wells, okay. Yes, the applicant is
8 requesting that we specify at this time which wells will
9 be monitored. And the monitoring that we're -- staff
10 feels that the monitoring network shouldn't be limited to
11 the four wells that are specified for the following
12 reasons.

13 One, the -- as we've heard earlier, the hydraulic
14 connection between Well Number 1 and the adjacent
15 water-bearing formation, it appears to have been
16 compromised by construction activities, and the
17 water-bearing zone that is being intercepted by that well
18 has not been determined at this time.

19 In regards to the Shrager well, it appears that
20 this well has been shown on previous maps provided by the
21 applicant, but staff is not aware of any well
22 construction, well use, or water level data from that
23 well, so it's inappropriate to determine at this time
24 whether that well is sufficient to monitor conditions in
25 the water-bearing zone intercepted by the water supply

1 well.

2 Three, the planned monitoring well, which is
3 planned to be located downstream from the evaporation
4 pond, the intent of that well is to monitor groundwater
5 quality in case there's a release from the ponds that
6 would cause dissolved constituents to migrate down through
7 the unsaturated zone and reach the water table; and,
8 therefore, that well would presumably monitor conditions
9 near the water table, which may or may not be
10 representative of conditions in the water-bearing zone
11 intercepted by the water supply well.

12 And then finally, once the monitoring plan is
13 developed, it needs to be reviewed and commented on by
14 San Bernardino County.

15 So for those reasons we think it's premature to
16 specify what the exact monitoring well network will be and
17 leave it to the review and acceptance by the CPM as
18 originally written in Soil and Water 7.

19 Going on to Soil and Water 9, Soil and Water 9
20 deals with the water supply reliability. And that's where
21 the applicant was asking to strike out "remediate" and
22 replace it with "reduce." And our interpretation of
23 "remediating" is to resolve or correct an issue. In this
24 case it's specifically declining groundwater levels and
25 storage. And we think that it's more appropriate to look

1 at it from the standpoint of trying to correct the problem
2 than to reduce it. Just simply reducing the water level
3 decline does not in itself decide that there's going to be
4 a -- it's going to correct the problem. So we feel that
5 that language should be maintained.

6 And then finally, in regards to the Cadiz water
7 supply, it's staff's opinion that at this time we
8 shouldn't limit ourselves to what the corrected strategy
9 will be because it depends largely on what magnitude and
10 mechanism -- the magnitude of the problem and the
11 mechanism that's causing it that should be considered. So
12 we do not feel that that should be included in Soil and
13 Water 9.

14 MS. HOLMES: Does that conclude your response to
15 Soil and Water 9 and 7?

16 MR. FIO: Yes, it does.

17 MS. HOLMES: These witnesses are available for
18 cross-examination -- oh, excuse me, one more item.

19 Mr. Yates, in the testimony that was provided by
20 CURE, there was some discussion about the appropriateness
21 of the use of the Maxey-Eakin Equation.

22 Do you recollect that testimony?

23 MR. YATES: Yes.

24 MS. HOLMES: And do you have a response to that
25 criticism?

1 MR. YATES: Yes. I'll go ahead.

2 Boris Poff, the expert for CURE, asserted that --
3 made two assertions. One was that we overestimated
4 recharge and that recharge is actually zero, and then
5 further in the climate change, suggested that climate
6 change would reduce recharge, which if the recharge is
7 already zero, I'm not sure how you would reduce it. But
8 I'd like to address both of those concerns.

9 On the Maxey Eakin method, is an empirical method
10 developed many decades ago to estimate recharge in basins,
11 developed for basins in Nevada that are actually quite a
12 bit wider than the ones in the Lavic Valley and southeast
13 California basins. And it's -- it calculates only in
14 lumps, average recharge for the whole basin and doesn't
15 consider the variations within the basin.

16 Well, since that time, there's been quite a bit
17 of additional research, field studies, site scale studies,
18 modeling, GIS modeling of recharge processes in the desert
19 southwest. A lot of this was done for the nuclear waste
20 depository site.

21 The USGS has had a multi-year program called the
22 "Southwest Groundwater Resources Project," and Tessera has
23 done some research in Arizona. And through those studies
24 we've greatly refined our understanding of recharge
25 processes at the basin. And in particular, what has

1 emerged is that in these basins, much of the recharge
2 originates up in the mountains where because soils are
3 very thin, rainfall is higher, and there's fractured
4 bedrock, and the precipitation is able to elude the plants
5 and get into the groundwater system, which it cannot do on
6 the valley floor.

7 So we agree that on the valley floor the recharge
8 is probably zero in the valley basin, and that the
9 recharge that is reaching the basin is coming from the
10 mountains either as mountain block recharge, which is
11 subsurface flow through fractures, or is mountain plant
12 recharge, which is rainfall runoff from the bedrock that
13 comes down the ephemeral washes and soil erosion and then
14 percolates into the basin and contributes to recharge.

15 And we were fortunate to have the person, the
16 researcher at USGS --

17 HEARING OFFICER KRAMER: Hold on a second.

18 Try enunciating as best you can. And should we
19 back off a little bit?

20 (Discussion between hearing officer and
21 court reporter.)

22 HEARING OFFICER KRAMER: Some of your words --
23 every other word is garbled. So --

24 MR. YATES: Okay.

25 HEARING OFFICER KRAMER: Are you in the room

1 there or are you on a cell phone?

2 MR. YATES: No, I'm in the room. I will slow
3 down and move farther away from the microphone. Most
4 people have had the opposite problem.

5 Is this okay like this?

6 HEARING OFFICER KRAMER: Yeah, he's happy right
7 now.

8 MR. YATES: Okay. So we were able to have the
9 researcher at the U.S. Geological Survey who had developed
10 the current groundwater recharge model for this region,
11 for the desert southwest region, do a simulation of the
12 Lavic Valley Groundwater Basin. And he concluded that
13 average annual recharge was on the order of 200 to 400
14 acre feet a year. And that's the valley that we presented
15 in our report, and because it's based on much more recent
16 and comprehensive research, we thought it was a much
17 better approach than just relying on the empirical
18 Maxey-Eakin method.

19 There's also -- Boris Poff asserted that there
20 was zero outflow from the basin. And previous
21 researchers, particularly Moyle in 1967 who prepared DWR
22 bulletin 9114, which is -- remains the fundamental
23 document for the southeast California basins, concluded
24 that he thought there probably was groundwater outflow
25 into the Broadwell Valley basin near Ludlow. So we don't

1 agree that there's zero outflow from the basin.

2 And then continuing on to the issue of climate
3 change, while we didn't review the climate change studies
4 and global circulation model results that Mr. Poff
5 submitted, if we just assumed that the conclusions were
6 correct, that there would be a decrease in winter
7 precipitation and an increase in the thunderstorm type
8 summer precipitation, we don't agree that one can conclude
9 that there would be less groundwater recharge as a result
10 of that, and that could be by two mechanisms.

11 One, if precipitation intensity goes up, a runoff
12 in the mountain bedrock areas would go up, and that would
13 discharge ephemeral flows which would then still percolate
14 into the groundwater basin. It's not clear that there
15 would be a net decrease in recharge.

16 And also, any change in climate is associated
17 with a change in vegetation; and vegetation very much,
18 very strongly influences recharge in these desert
19 environments. So there could be a decrease in vegetation
20 in the mountain areas if these changes in precipitation
21 occur that make it more difficult to survive, and then
22 that would open up for bare soil areas where there would
23 be fewer losses as rainfall infiltrates through the
24 bedrock fractures.

25 So in both cases it's not clear that the change

1 in precipitation would necessarily lead to a decrease in
2 recharge. So we would like to stick with our original
3 analysis.

4 Continuing on with Burlington Northern's comments
5 from Mr. Thomas Schmidt that related to -- that related to
6 subsidence, while we don't disagree that -- with the
7 suggestion of monitoring for subsidence, we think the
8 possibility that it would occur is extremely remote
9 because the mechanism by which subsidence would occur
10 would be compaction of clays that occurs when you pump an
11 aquifer and you lower the hydraulic head in the aquifer,
12 then the clays in between can compress. And that was the
13 mechanism in the San Joaquin Valley, the Santa Clara
14 Valley; it's the most common mechanism for subsidence.
15 But typically that's only seen when water levels in the
16 aquifers have declined many tens of feet, sometimes
17 hundreds of feet. And our analysis indicates that the
18 anticipated water level declines are only a few feet.

19 So we -- it doesn't seem to warrant a major
20 effort, but, you know, given the low probability of
21 occurrence of subsidence, but it may be appropriate to at
22 least establish some benchmark elevations so that if a
23 concern arises later on, then you'd have a reference point
24 to compare to.

25 MS. HOLMES: Thank you.

1 These witnesses are available for
2 cross-examination.

3 HEARING OFFICER KRAMER: The applicant?

4 MS. FOLEY GANNON: Thank you.

5 CROSS-EXAMINATION

6 MS. FOLEY GANNON: Just a couple of questions.

7 I think it was Mr. Fio who was speaking about the
8 response to the suggested changes; is that correct?

9 MR. FIO: Yes.

10 MS. FOLEY GANNON: These questions then are
11 directed to you.

12 With regard to Soil and Water 7 and the data from
13 the Mojave Basin, just so I can make sure I understand
14 what the intent of this condition is, you're requesting
15 that the applicant gather data that is being collected by
16 others and include that in the monitoring reports; is that
17 correct?

18 MR. FIO: Yes.

19 MS. FOLEY GANNON: We don't object to that. We
20 would just request that possibly the language be revised
21 to clarify that it's not requesting us to drill a test
22 well or monitoring well within that basin.

23 With regard to Soil and Water 9, when you use the
24 word "remediate," could that possibly include also a
25 reduced use of water? I mean, what I'm asking is, is

1 "remediate" sort of a broader, more general term which
2 captures as you expressed the need to address what the
3 problem is; is that correct?

4 MR. FIO: Yes, it's correct. It can be mean a
5 reduction in water use, which is also implied by it being
6 a water conservation plan.

7 MS. FOLEY GANNON: All right. With those
8 clarifications, we stipulate to these changes.

9 We have no further questions. Thank you.

10 HEARING OFFICER KRAMER: Are they changes or the
11 lack of change in many cases?

12 MS. FOLEY GANNON: Lack of changes.

13 HEARING OFFICER KRAMER: Okay. It would be
14 helpful then for you and the staff to just produce a sort
15 of final language that we can plagiarize from.

16 MS. FOLEY GANNON: Absolutely.

17 HEARING OFFICER KRAMER: And do I understand that
18 then staff and the applicant have agreed to remove the
19 restriction of the alternative supply to coming from the
20 Cadiz area?

21 MS. HOLMES: We never had it in the condition in
22 the first place.

23 MS. FOLEY GANNON: We have no objection to having
24 it be broader.

25 HEARING OFFICER KRAMER: Okay. So we'll remove

1 that simple portion of the applicant's -- well, you can
2 incorporate that in the final version of Soil and Water 9
3 then.

4 MS. FOLEY GANNON: Correct.

5 MS. HOLMES: I think the only change that would
6 be -- that would be provided would be clarification in
7 Soil and Water 7 about the collection of existing data as
8 opposed to drilling new wells in lower Mojave.

9 MS. FOLEY GANNON: That's my understanding.

10 MS. HOLMES: Perhaps the definition of
11 "remediation" in Soil and Water 9.

12 MS. FOLEY GANNON: That's my understanding as
13 well, Ms. Holmes.

14 HEARING OFFICER KRAMER: Okay. Well, we'll leave
15 it to you to work out something to show to everyone else.

16 Next, Basin and Range Watch, any questions?

17 They say no.

18 CURE?

19 MS. MILES: Just one question.

20 CROSS-EXAMINATION

21 MS. MILES: Has staff evaluated whether any
22 additional construction may be needed for the operation of
23 Well Number 3?

24 MR. FIO: No.

25 This is John Fio.

1 No.

2 MS. MILES: Thank you.

3 HEARING OFFICER KRAMER: Burlington Northern?

4 MR. LAMB: Thank you.

5 CROSS-EXAMINATION

6 MR. LAMB: Steve Lamb for BNSF.

7 I'm not sure if it was Mr. Yates or Mr. Fio that
8 was referring to Mr. Schmidt's testimony, but there was a
9 reference to earlier testimony about the Pisgah Fault
10 line.

11 Do you recall that?

12 MR. YATES: Yes.

13 MR. LAMB: And would you agree that in this
14 particular area we are in a relatively active earthquake
15 zone with the Pisgah Fault line?

16 MR. WEAVER: Yeah.

17 This is Casey Weaver.

18 Sure, yes, that's an Alquist-Priolo active fault
19 zone.

20 MR. LAMB: In fact, within the last ten years
21 there was a 7.1 earthquake, right?

22 MR. WEAVER: That was the Hector Valley
23 Earthquake. I believe it was maybe associated with the
24 Lavic faults that go through the middle of the site.

25 MR. LAMB: Okay. That was within the last ten

1 years, right?

2 MR. WEAVER: I believe that's true.

3 MR. LAMB: And, sir, it appears from the
4 testimony that we've heard today, while there is a belief
5 that there isn't a connectivity between the basins, it's
6 really not clear whether there is or there isn't a
7 connectivity between the basins.

8 Would you agree with that?

9 MR. YATES: This is Gus Yates.

10 Our point is that the hydraulic properties of
11 that fault have never really been established. There
12 appear to be some water level differences; it's hard to
13 say whether there's a stair step. So there remains some
14 uncertainty as to what the actual hydraulic
15 characteristics are. And with that in mind, we thought it
16 would be useful to have Mojave -- lower Mojave water level
17 information to evaluate in addition to the water level
18 data we collect from the monitoring program for the
19 project in the Lavic basin.

20 MR. LAMB: Correct. Basically you just don't
21 know, right?

22 MR. YATES: That's right. We think there's some
23 uncertainty about the hydraulic characteristics of that
24 fault.

25 MR. LAMB: Okay. I appreciate that, sir. And I

1 understand that your comment regarding subsidence noted
2 that it usually only occurs if there are relatively large
3 drawdowns in the range of a hundred -- hundred feet,
4 right?

5 MR. YATES: No, I said ten, tens of feet anyway
6 before in the places where it's been a problem.

7 MR. LAMB: Tens of feet, okay.

8 Well, it's a relatively common occurrence in
9 desert areas such as Phoenix and Las Vegas, right?

10 MR. YATES: I won't speak to those areas.

11 MR. LAMB: Oh, you're not familiar with them?

12 MR. YATES: Not testifying to those areas at this
13 time.

14 MR. LAMB: Okay. Are you generally familiar that
15 subsidence is a common phenomenon in the desert areas?

16 MR. YATES: I'm not familiar with subsidence in
17 other desert regions, no.

18 MR. LAMB: Okay. Are you familiar with it in
19 this region?

20 MR. YATES: I've heard no reports of it. It was
21 not mentioned in any of the reference materials I studied
22 for this project.

23 MR. LAMB: Okay. I have no further questions.

24 HEARING OFFICER KRAMER: Thank you.

25 Any redirect, staff?

1 MS. HOLMES: No.

2 HEARING OFFICER KRAMER: Okay. Is Dr. Poff going
3 to testify again about this topic?

4 If you'll resume the witness chair.

5 (Boris Poff was previously sworn.)

6 DIRECT EXAMINATION

7 MS. MILES: Dr. Poff, do you have any changes to
8 your sworn testimony regarding water supply?

9 DR. POFF: No.

10 MS. MILES: And do you think that the applicant's
11 estimated water for operations is -- the amount is
12 realistic?

13 DR. POFF: Not necessarily, no. Given that the
14 soil types here in the Mojave, especially with the
15 disturbed desert pavement and the cryptobiotic crust, it's
16 very different, let's say, in Arizona or New Mexico. I
17 think the applicant should expect much more dust to settle
18 on the SunCatcher units. And I would not be surprised if
19 the operational water requirements would be considerably
20 higher for mirror washing, or maybe the energy output
21 would be considerably lower, I don't know.

22 MS. MILES: What is the basis for your conclusion
23 that the water supply estimates are speculative that you
24 concluded in your testimony and that the water supply may
25 not be reliable?

1 DR. POFF: The applicant's own studies identified
2 numerous uncertainties in their analysis. There is a
3 potential that this well, Well Number 3, is located in a
4 much smaller aquifer than the applicant suggests and that
5 it will run dry in the short term. To establish the size
6 of the aquifer and the cone of depression, there should
7 have been several monitoring wells in place throughout the
8 aquifer, basically to the suspected edge of the aquifer
9 before the pump test was conducted at the production
10 Well Number 3. And the test should have been run for, I
11 think, at least 72 hours instead of 24 hours. And the
12 test the applicant ran only provides information on how
13 quickly the well recovers; provides no indication to the
14 size or the reliability of the aquifer.

15 Based upon the information provided by the
16 applicant, it's my professional opinion that it's
17 irresponsible to consider Well Number 3 a reliable and
18 primary water source for the Calico Solar Project until
19 additional monitoring wells on and off site and an
20 additional adequate pump test can confirm that the
21 assumptions made by the applicant are correct. And it is
22 my opinion that the documentation provided by the
23 applicant does not demonstrate that a reliable water
24 supply exists for the project.

25 I would recommend that this project not be

1 permitted without additional investigation into the water
2 supply and a demonstrated backup water supply.

3 MS. MILES: Is the applicant's proposed
4 monitoring wells as described in their rebuttal testimony,
5 are those adequate?

6 DR. POFF: The applicant did not provide enough
7 information on these proposed wells to make this
8 determination. What are the depths of these wells makes
9 a -- you know, for Well Number 3, and how exactly will
10 that be monitored. To me, it's even questionable if they
11 are in the same aquifer at the same depth, we don't know.
12 According to the URS aquifer testing report, URS states
13 because there's no record of other wells or borings, and
14 I'm quoting here, "other wells or borings drilled to this
15 depth in this basin, the aerial extent of the aquifer is
16 not known." Based on this information, my answer would be
17 no.

18 MS. MILES: Do you have any comments about the
19 applicant's proposed change to Soil and Water 7 and Soil
20 and Water 9?

21 DR. POFF: I believe that the energy commission's
22 Soil and Water 7 and 9 were appropriate; and given the
23 lack of information, I would not recommend the proposed
24 changes by the applicant.

25 Further, there is no concrete evidence that Cadiz

1 is an adequate alternative water supply source for this
2 project because there's a good possibility that the
3 groundwater extraction in Cadiz is also water mining
4 operation, which means that the groundwater there
5 eventually can be depleted within the project's life span.

6 MS. HOLMES: Excuse me. We're having trouble
7 hearing Dr. Poff.

8 DR. POFF: Okay. Is this better?

9 MS. HOLMES: Yes. Thank you.

10 DR. POFF: I believe currently the groundwater
11 extraction at Cadiz is around 5,000 acre feet, and the
12 USGS estimates that the recharge, however, is somewhere
13 between 2- to 3,000 acre feet, and that the -- only those
14 that have a financial stake in the groundwater extraction
15 and those that they have hired have provided information
16 with much higher recharge rates, which were most likely
17 based on the geographic extent of the area rather than
18 desert hydrology.

19 Exact figures, I believe, were given in the
20 original staff assessment on Water Table 2. The message
21 here is that there's just a lot of uncertainty about the
22 actual recharge, and therefore, reliability as a long-term
23 water supply, Cadiz, I think, is questionable.

24 MS. MILES: Thank you, Dr. Poff.

25 No further questions.

1 HEARING OFFICER KRAMER: The applicant?

2 CROSS-EXAMINATION

3 MS. FOLEY GANNON: Dr. Poff, when you were
4 talking about the likely winds impacts that could happen
5 and the need to do mirror washing, are you aware that the
6 Maricopa facility is in the midst of a disturbed
7 agricultural area?

8 DR. POFF: Yes, I'm familiar with the area.

9 MS. FOLEY GANNON: So you're familiar with the
10 amount of dust that is generated in that area as a result
11 of the ongoing agricultural activities?

12 DR. POFF: I'm not familiar with the exact
13 amounts.

14 MS. FOLEY GANNON: Okay. All right.

15 And with regard to the well testing that was done
16 for the project, I believe you just said you believe a
17 72-hour test would be appropriate.

18 What's the standard municipal test that's done
19 for water supply analysis?

20 DR. POFF: Well, this is not really -- this is an
21 industrial site, not really --

22 MS. FOLEY GANNON: But do you know what the
23 standard test is that's done for most municipal supplies?

24 DR. POFF: I'm not -- I do not know exactly what
25 the specifications are for San Bernardino County.

1 MS. FOLEY GANNON: Okay. Thank you very much.

2 HEARING OFFICER KRAMER: Staff?

3 MS. HOLMES: No questions.

4 HEARING OFFICER KRAMER: Basin and Range Watch?

5 They say no questions.

6 Mr. Lamb?

7 He says no questions.

8 So that would seem to conclude our soil and water
9 discussions. We have homework for the staff and the
10 applicant to present us some final proposed agreement on
11 Soil and Water 7 and 9. The applicant has agreed to leave
12 Soil and Water 8 as it is proposed by staff as well as
13 Soil and Water 3. And staff has agreed with the
14 applicant's proposed changes to Soil and Water 2.

15 Does that all sound correct?

16 MS. HOLMES: Yes.

17 MS. FOLEY GANNON: Yes.

18 HEARING OFFICER KRAMER: Okay. Our lunch has
19 arrived. And I'm sure you're hungry up in Sacramento. So
20 can we get back here at 12:45?

21 MS. HOLMES: Can we release the soil and water
22 witnesses? Are we ready to move on to hazardous materials
23 and worker safety and fire protection?

24 HEARING OFFICER KRAMER: Yes and yes.

25 MS. HOLMES: Thank you.

1 HEARING OFFICER KRAMER: And then you have to
2 give me a yes to 12:45 though.

3 Well --

4 MS. HOLMES: Yes.

5 HEARING OFFICER KRAMER: -- see you at 12:45.

6 Okay. We're off the record. Thank you.

7 (Lunch Recess.)

8 HEARING OFFICER KRAMER: Sacramento, are you with
9 us?

10 MS. HOLMES: We are.

11 HEARING OFFICER KRAMER: Dr. Greenberg?

12 DR. GREENBERG: Present.

13 HEARING OFFICER KRAMER: And enunciating as
14 always.

15 Okay. We're -- before we start the worker safety
16 fire protection/haz mat item, the representatives of Basin
17 and Range Watch are about to leave us. And they're
18 perfectly comfortable with our introducing and accepting
19 their exhibits into the record later. But we wanted to
20 make sure that they had an opportunity to respond to any
21 objections to the admission of their exhibits, if there
22 might be any.

23 So is anybody intending to object to any of
24 Exhibits 800 through 804?

25 MS. HOLMES: Staff is not.

1 MS. FOLEY GANNON: Applicant is not.

2 HEARING OFFICER KRAMER: Okay.

3 MR. LAMB: No objection from BNSF.

4 HEARING OFFICER KRAMER: Okay. I'm hearing no
5 objections from around the table, so you may go when you
6 desire, and we'll take care of getting those exhibits
7 officially in at the end of the day when we clean up all
8 that.

9 MS. CUNNINGHAM: Thank you.

10 MR. EMMERICH: Thank you.

11 COMMISSIONER EGGERT: And thank you very much for
12 your participation.

13 HEARING OFFICER KRAMER: Okay. So on the topic
14 of worker safety and fire protection, which is being
15 combined with hazardous materials management, let's begin
16 with the applicant's witnesses.

17 MS. FOLEY GANNON: All right. We are calling a
18 panel of three. Mike Alhalabi, Tariq Hussain, and we have
19 Tricia Winterbauer on the telephone.

20 Trish, are you there?

21 We will start with these witnesses, and hopefully
22 Ms. Winterbauer will join us.

23 They have not been sworn in.

24 (Mohamad Alhalabi and Tariq Hussain were sworn.)

25 HEARING OFFICER KRAMER: Thank you.

1 THE REPORTER: If you'd give the spelling of the
2 names on the record, I'd appreciate it.

3 DIRECT EXAMINATION

4 MS. FOLEY GANNON: Mr. Alhalabi, could you please
5 your name for the record.

6 MR. ALHALABI: My name is Mohamad Alhalabi.
7 Mohamad, M-o-h-a-m-a-d, last name, A-l-, as in Larry,
8 -h-a-l-a-b-i.

9 HEARING OFFICER KRAMER: Mr. Hussain, would you
10 spell your name, please.

11 MR. HUSSAIN: First name is T-a-r-i-q --

12 MS. HOLMES: We can't -- if there's a witness
13 speaking, we can't hear at all.

14 MR. HUSSAIN: The microphone is on now. Sorry.
15 First name is spelled as T-a-r-i-q. Last name
16 Hussain, H-u-s-s-a-, as in apple, -i-n.

17 MS. FOLEY GANNON: Thank you.

18 Mr. Alhalabi, starting with you, are the same
19 person who gave written testimony earlier in these
20 proceedings which is marked as Exhibit 65?

21 MR. ALHALABI: Yes, I am.

22 MS. FOLEY GANNON: And is the resume attached to
23 your written testimony still accurate and correct?

24 MR. ALHALABI: Yes, it is.

25 MS. FOLEY GANNON: And do you have any additions

1 or corrections to make to your testimony?

2 MR. ALHALABI: No, I don't.

3 MS. FOLEY GANNON: Thank you.

4 Mr. Alhalabi, can you just briefly explain the
5 position that you hold at Tessera?

6 MR. ALHALABI: I'm a senior mechanical engineer.
7 My responsibility covers all mechanical equipment on site;
8 that covers HVAC, mechanical equipment, hydrogen pumps,
9 fire protection, fueling facilities, and so forth and so
10 on.

11 MS. FOLEY GANNON: Thank you.

12 And with regard to the project's hydrogen system,
13 can you just give us a basic description of the way that
14 the hydrogen system will function? And if we were putting
15 up an exhibit, which this has not been admitted into the
16 record yet, this was submitted yesterday at 4:00 at the
17 request of Ms. Holmes, we can mark this as exhibit -- are
18 we on 95?

19 MS. HOLMES: I'm sorry, I missed the number.
20 Could you give it to me again, please.

21 MS. FOLEY GANNON: We're checking. Just one
22 second. 94?

23 HEARING OFFICER KRAMER: Looks like 94 is the
24 next one that I have. And if we missed --

25 MS. FOLEY GANNON: It has been changed, it's been

1 updated to add a few extra details at the request of
2 Ms. Holmes.

3 HEARING OFFICER KRAMER: Okay. So this is --

4 MS. FOLEY GANNON: If people are looking in the
5 exhibits, you can see Exhibit 90 is very similar, it just
6 has -- it has some extra details on it.

7 MR. BASOFIN: Can this go out on the distribution
8 list?

9 MS. FOLEY GANNON: It has not. We will make sure
10 that it does.

11 MS. HOLMES: Ms. Foley Gannon, when you say --

12 MS. FOLEY GANNON: It did, I'm sorry, it did. It
13 was docketed yesterday around 4:00.

14 MS. HOLMES: Is this the same map that was
15 docketed at around 4:00, or has it been changed?

16 MS. FOLEY GANNON: It's the same map. And we
17 also have hard copies which we'll distribute, and I
18 believe there are also hard copies there in Sacramento
19 which will be distributed.

20 MS. HOLMES: Apparently not, but that's all
21 right.

22 HEARING OFFICER KRAMER: Okay. And the changes
23 you spoke of were from Exhibit 90.

24 MS. FOLEY GANNON: That's correct.

25 HEARING OFFICER KRAMER: Okay. Thanks. Okay.

1 This is 94 then.

2 (Applicant's Exhibit 94 was marked for
3 identification.)

4 HEARING OFFICER KRAMER: Go ahead.

5 MS. FOLEY GANNON: Mr. Alhalabi, as I just asked,
6 can you describe overall the way the hydrogen system will
7 be working on the site?

8 MR. ALHALABI: Yes. The power plant site, based
9 on this exhibit here, is divided into two sections, the
10 northern and southern section. On the northern side you
11 have completely independent hydrogen supply and
12 distribution system. And it's mirror imaged on the south
13 side with similar system, however, it's little bit smaller
14 in size based on the need to support the number of
15 SunCatchers on the south side versus the north side.

16 MS. FOLEY GANNON: And for clarity, the two
17 hydrogen systems are shown on this Exhibit 94 in the green
18 circle and in the pink circle; is that correct?

19 MR. ALHALABI: Yes.

20 MS. FOLEY GANNON: Thank you.

21 Continue.

22 MR. ALHALABI: Starting out with the hydrogen
23 supply side, we have a hydrogen station that generates and
24 stores hydrogen to support any hydrogen loss throughout
25 the field. So the hydrogen generator on the north side,

1 which would be similar system on the south side, will
2 generate hydrogen and store it at 600 pounds of pressure.

3 And from that point on it's connected with
4 through hard pipe in the ground, half-inch pipe, to a
5 total of 95 compressor stations covering both sides, north
6 and south sides.

7 Piping is connected all the way to each one of
8 the compressor groups out in the field, and it's stored
9 there at 600 pounds of pressure, ready to support any
10 hydrogen loss on each one of the compressor groups that is
11 distributed throughout the field.

12 MS. FOLEY GANNON: So for clarity, there is --
13 within those circles that we just discussed, there is the
14 hydrogen generator, or you're saying that the hydrogen and
15 a compressor; is that correct?

16 MR. ALHALABI: Yes, yes.

17 MS. FOLEY GANNON: And then there are individual
18 compressors for each of the three 60-unit groups; is that
19 correct?

20 MR. ALHALABI: Correct.

21 MS. FOLEY GANNON: Thank you. Continue, please.

22 MR. ALHALABI: So at the distribution level these
23 units are independently-operated systems supporting a
24 group of 360 SunCatchers equivalent to nine-megawatt -- a
25 group of 9 megawatt unit. The system works where early in

1 the morning hydrogen is charged to each one of the
2 SunCatchers. It operates during the day. And at the end
3 of the day, it's moved to the low side for storage, and
4 the cycle starts all over again the next day. Any
5 hydrogen lost during operating hours or at night is made
6 up, coming through half-inch line from the hydrogen
7 generation station.

8 MS. FOLEY GANNON: So the hydrogen is brought to
9 each one of the individual SunCatchers each morning?

10 MR. ALHALABI: It's actually a 24/7 operation.

11 MS. FOLEY GANNON: 24/7.

12 MR. ALHALABI: It's continuously connected and
13 providing hydrogen as needed.

14 MS. FOLEY GANNON: Thank you.

15 And the insert that's at the top of Figure 95,
16 does this show the basic layout of the compressor groups
17 and the pipes?

18 MR. ALHALABI: Correct.

19 MS. FOLEY GANNON: And can you describe, where
20 are the pipes going to be located on the site?

21 MR. ALHALABI: Of course at the generation
22 station it's all above ground connecting the generator to
23 the compressor and storage tank. And from the storage
24 tank on forward, it's going underground through
25 distribution system covering the whole site.

1 MS. FOLEY GANNON: And the location of these
2 pipes, are they going to be co-located or in the same
3 vicinity of the other utilities? Are there other
4 utilities that go to the groups of SunCatchers?

5 MR. ALHALABI: We have electric wiring; and both
6 supply and power production lines will be in the same
7 vicinity.

8 MS. FOLEY GANNON: So they would be running in
9 separate trenches, but this the same area --

10 MR. ALHALABI: Correct.

11 MS. FOLEY GANNON: -- is that correct?

12 Thank you.

13 And can you describe the change -- the project
14 had originally proposed to have a single hydrogen
15 generation system, I believe it was north of the railroad
16 near the main service complex; is that correct?

17 MR. ALHALABI: Yes.

18 MS. FOLEY GANNON: And what is the source of this
19 proposed change to have two separate hydrogen generation
20 systems?

21 MR. ALHALABI: I understand there was some
22 concerns about the railroads, where they did not want any
23 hydrogen lines crossing underneath railroad tracks. So we
24 decided to eliminate that concern by providing two
25 independently-operated systems north and south of the

1 tracks.

2 MS. FOLEY GANNON: And there have been changes,
3 as I understand it, in the calculations about the amount
4 of hydrogen that is necessary to operate the proposed
5 solar field.

6 Can you speak to that change?

7 MR. ALHALABI: Yes.

8 We started out initially designing the what we
9 call the PCU, the power conversion unit, with certain
10 performance criteria and specifications. And with that it
11 called for charging -- initial charge of all the PCUs
12 origins with 3.6 -- 3.4 standard cubic feet of hydrogen
13 per unit. That worked fine; however, our concern to
14 increase the performance and the heater lifecycle, we
15 thought it would be much more advantageous for us to
16 produce and introduce more hydrogen and cycle hydrogen
17 more often through the heater head than initially
18 anticipated.

19 So mainly the increase from 3.4 standard cubic
20 feet to 11 was it's the same amount of hydrogen in the
21 line except it's being recycled more often into and
22 through each one of the power conversion units.

23 MS. FOLEY GANNON: And have you looked at the
24 idea of or studied how much hydrogen loss will be likely
25 to happen in the system?

1 MR. ALHALABI: Hydrogen loss, as far as we know
2 and as far as our tracking system at Maricopa Solar and
3 our Sandia -- our test site at Sandia test lab site, shows
4 the same amount of loss through gasketing material,
5 O-rings, it's all mechanical equipment. Once you run any
6 type of gas through the engine, you're going to have some
7 losses there. It's natural. This loss is staying the
8 same because your operating hours are the same hours, your
9 pressure conditions are the same. So as far pressure,
10 temperature, and operating hours are staying the same, so
11 your losses are going to be the same whether you are
12 cycling three standard cubic feet or 11 standard cubic
13 feet at the same time your losses are going to be the
14 same.

15 MS. FOLEY GANNON: And there was a -- there has
16 been a discussion of a potential alternatives delivery
17 system for the hydrogen.

18 Can you describe that alternative?

19 MR. ALHALABI: We were concerned about the cost
20 of centralized system versus distributed system. So we
21 looked into splitting the hydrogen supply as small as one
22 compressor per generator. And we looked at three, we
23 looked at four.

24 So in the process of trying to optimize the
25 system and trying to optimize its efficiency, we looked at

1 what we consider a centralized system, which the system I
2 just finished describing, versus a distributed system,
3 which mainly a compressor group, compressor that would
4 support group of power conversion units.

5 MS. FOLEY GANNON: And then the hydrogen would be
6 distributed.

7 MR. ALHALABI: The same process of hydrogen
8 supply will go through on-site generation where we
9 generate hydrogen at one location, it will be transferred
10 through a truck out in the field and will be distributed
11 to, whether it's a group of four power conversion units or
12 one on one, it will be transferred to these locations to
13 support any hydrogen loss in each one of those units.

14 MS. FOLEY GANNON: And under the -- that system,
15 would you now be proposing to have two still generation
16 systems, one to the north and one to the south?

17 MR. ALHALABI: With that system we could go
18 either way. We could go with one unit or with two because
19 the source is the same. You know, if you're going to
20 truck it, you know, it's going to go on the truck, on a
21 vehicle, whether it's transported by DOT-rated cylinders
22 or otherwise, it's mainly going on over the road, and it
23 won't require any disturbance to railroads or tracks or
24 something like that.

25 MS. FOLEY GANNON: And just so we understand the

1 basis for this hydrogen, what role does hydrogen play in
2 the SunCatcher technology?

3 MR. ALHALABI: Hydrogen gas mainly is used as a
4 vehicle to transfer heat from the sun all the way to the
5 generator through a mechanical means cylinders. Where you
6 take hydrogen and you heat it in the eye of the engine,
7 you bring it up to about 1300 -- 12- to 1300 degrees
8 Fahrenheit within six seconds, hydrogen expands, it drives
9 pistons, and that -- you're transferring solar energy into
10 mechanical energy into electrical energy, and that goes in
11 a cycle of about roughly about six seconds. So hydrogen
12 is used as a vehicle to transfer solar energy into
13 electrical energy.

14 MS. FOLEY GANNON: Thank you.

15 And, Mr. Hussain, turning now to you, are you the
16 same person who gave testimony, written testimony earlier
17 in these proceedings which is now marked as Exhibit 90?

18 MR. HUSSAIN: Yes.

19 MS. FOLEY GANNON: And is the resume attached to
20 that written testimony still accurate and correct?

21 MR. HUSSAIN: To the best of my knowledge.

22 MS. FOLEY GANNON: And before we go into your
23 potential changes or revisions to that testimony, we have
24 just been informed that Ms. Winterbauer is unavailable to
25 testify. Are you her supervisor?

1 MR. HUSSAIN: I do work with her, and I'm
2 familiar with her work.

3 MS. FOLEY GANNON: Are you also familiar with her
4 written testimony?

5 MR. HUSSAIN: Yes, I am.

6 MS. FOLEY GANNON: Can you verify the accuracy
7 of, to the best of your knowledge, her testimony?

8 MR. HUSSAIN: Yes, I can.

9 MS. FOLEY GANNON: And can you sponsor it as your
10 own, which is marked as Exhibit 81?

11 MR. HUSSAIN: I can.

12 MS. FOLEY GANNON: Thank you.

13 Do you have any corrections or additions to make
14 to your earlier written testimony?

15 MR. HUSSAIN: On the rebuttal?

16 MS. FOLEY GANNON: Any of your testimony.

17 MR. HUSSAIN: No, no, no, I don't.

18 MS. FOLEY GANNON: Thank you.

19 Can you describe the role that you have played in
20 analyzing the Calico project?

21 MR. HUSSAIN: I play a specialized role in this;
22 I mean, I did take part in the writing and of the
23 hazardous waste and hazardous material plan that was
24 presented in the AFC, but I do have a specialized role
25 that I deal with whole issues related with hydrogen and

1 did supervise the overall assessment and the risk
2 assessment presented in the AFC.

3 MS. FOLEY GANNON: And can you briefly summarize
4 the risk assessment that has been undertaken for this
5 project?

6 MR. HUSSAIN: For this project, just to
7 summarize, and I know we have discussed this before, what
8 we did is take, per guidance that is provided by
9 regulation, we tried to simulate conditions under which
10 hydrogen can be released and determine the impact,
11 worst-case impact that can be presented by such a release.

12 What we do here is take the largest vessels and
13 see if a total release of hydrogen occurs and everything
14 goes according to ideal condition, what would be the
15 impact that would be presented. And if there's any
16 sensitive receptors within the area under which the impact
17 can occur, we point it out.

18 So we considered a number of scenarios based on
19 that and presented the results in the AFC.

20 Also what we did is simulate conditions under
21 which the total inventory of hydrogen can be released, and
22 that would be almost the worst-case analysis, although
23 such a scenario for a number of reasons is highly unlikely
24 to occur.

25 MS. FOLEY GANNON: So in the worst-case scenario,

1 you were assessing the impact of all the hydrogen being
2 released simultaneously?

3 MR. HUSSAIN: Within a short period of time, yes.

4 MS. FOLEY GANNON: And there also would be an
5 ignition present at that moment that it was released?

6 MR. HUSSAIN: Yes.

7 MS. FOLEY GANNON: And an explosion occurring?

8 MR. HUSSAIN: Yes.

9 MS. FOLEY GANNON: And what would be the
10 consequences of this unlikely event?

11 MR. HUSSAIN: Well, the consequences would be
12 dependent upon the nature of the hydrogen itself. There
13 would be a release, there would be accumulation of enough
14 hydrogen to form an explosion mixture. There would be a
15 spark present that can ignite that explosion mixture. And
16 then what will happen is an explosion occurred that will
17 have an impact within a certain radius from the center of
18 the explosion.

19 MS. FOLEY GANNON: And did you do a calculation
20 of what that radius would be on this project?

21 MR. HUSSAIN: Yes, I did. Now, the first
22 calculation was done when we had single unit and the total
23 inventory was about 23,000 pounds, and we determined what
24 the impacted radius would be in the vicinity of 0.3 miles.

25 MS. FOLEY GANNON: And 0.3 miles, would that

1 reach the nearest sensitive receptor?

2 MR. HUSSAIN: There's no sensitive receptors that
3 we know of within the area of impact.

4 MS. FOLEY GANNON: Would it reach Highway 40?

5 MR. HUSSAIN: No.

6 MS. FOLEY GANNON: It would have no impact on
7 Highway 40?

8 MR. HUSSAIN: No.

9 MS. FOLEY GANNON: And no sensitive receptors.

10 MR. HUSSAIN: That is correct.

11 MS. FOLEY GANNON: And again, you said that you
12 think this scenario of having a major explosion is highly
13 unlikely. Can you just briefly again describe the reasons
14 why you believe that would be highly unlikely?

15 MR. HUSSAIN: I'd like to point out three reasons
16 for that.

17 Number one, hydrogen is different than other
18 flammable fields. And that difference provides safety
19 benefits as compared to gasoline or other fields.

20 Number two, hydrogen has a rapid diffusivity,
21 meaning once it's released, it rapidly ascends in the
22 atmosphere, which is, just as it compares, and is three
23 times faster than natural gas. And you have to have an
24 accumulation of hydrogen, which in an open atmosphere is
25 very difficult to achieve. Most cases when hydrogen is

1 confined upon release, that is where the explosion can
2 take place.

3 And the third -- well, these are the two reasons
4 I'd like to present at this point.

5 MS. FOLEY GANNON: And have you reviewed the
6 supplemental staff assessment?

7 MR. HUSSAIN: I have.

8 MS. FOLEY GANNON: And in that, that staff
9 assessment, they discuss the potential for wildfires to
10 occur as a result of some incident occurring on the
11 project site.

12 Did you -- do you recall that analysis?

13 MR. HUSSAIN: Yes, I do.

14 MS. FOLEY GANNON: Can you give us your response
15 to that analysis?

16 MR. HUSSAIN: I would like to offer a different
17 opinion on that, and based on a couple reasons that I have
18 already provided. And the third reason is that hydrogen
19 combustion produces heat and water, and primarily because
20 of the presence of water, the hydrogen fire has very less
21 radiant heat as compared to the gasoline fire. And since
22 the flame emits low level of heat near the flame, the
23 flame itself is hot, but in the surrounding area it does
24 not radiate as much energy as a corresponding gasoline or
25 propane fire.

1 The fact has a significant -- I mean, and that
2 means that it does not produce a lot of -- the chances of
3 producing secondary fires is quite less. And therefore, I
4 would like staff to consider these properties of hydrogen
5 and maybe reconsider what they've written on the staff
6 assessment.

7 MS. FOLEY GANNON: So to make sure I understand
8 what you're saying, you're saying that you first off
9 thought there was not a high likelihood that fire would be
10 caused by the project; is that correct?

11 MR. HUSSAIN: That is correct.

12 MS. FOLEY GANNON: And that if the fire that was
13 caused by this project was related to hydrogen, that would
14 be a lower flame, which would be less likely to cause
15 secondary fires; was that accurate?

16 MR. HUSSAIN: What I mean is that since hydrogen
17 upon ignition does not radiate heat, so there are things
18 around it that does not catch fire.

19 MS. FOLEY GANNON: You say it much better than I
20 did. Thank you.

21 Are you aware of the proposed revisions to the
22 conditions of certification that the applicant has
23 presented?

24 MR. HUSSAIN: Yes.

25 MS. FOLEY GANNON: If we can turn now, and this

1 is, again, Attachment A to Exhibit 82, and turning first
2 now to what's HAZ 2 condition, can you describe the
3 proposed change that the applicant has made?

4 MR. HUSSAIN: Could you point out the page,
5 please?

6 MS. FOLEY GANNON: It is on page 19.

7 MR. HUSSAIN: Yes.

8 MS. FOLEY GANNON: And can you describe this
9 proposed change?

10 MR. HUSSAIN: At least 60 days prior to receiving
11 any hydrogen on site, that means before we bring any
12 hydrogen on site for commissioning and operation, the
13 project owner shall provide a copy of the final risk
14 management plan to the CPM for approval.

15 MS. FOLEY GANNON: And so the risk management
16 plan would be addressing how hydrogen would be handled on
17 this site; is that correct?

18 MR. HUSSAIN: The risk management plan deals with
19 off-site consequence that can be caused by hydrogen
20 release.

21 MS. FOLEY GANNON: And as the staff had proposed
22 that this risk management plan would have been required
23 prior to construction, and the applicant is suggesting
24 that the risk management plan be changed to being required
25 prior to hydrogen being present on site; is that correct?

1 MR. HUSSAIN: That is correct, and that is
2 standard practice.

3 MS. FOLEY GANNON: Thank you.

4 Turning now to Hazard Condition 5, which is on
5 the following page --

6 MR. HUSSAIN: Yes.

7 MS. FOLEY GANNON: -- can you describe the change
8 that the applicant is proposing?

9 MR. HUSSAIN: We are suggesting that we change
10 the wordings "signed by the owner certifying the
11 background investigation has been conducted and all
12 permanent project personnel whose responsibilities would
13 include the handling or managing of hydrogen or the
14 hydrogen system," we propose some language change in that
15 statement.

16 MS. FOLEY GANNON: So under the staff's proposed
17 condition, this background check would be required for
18 all -- all permanent employees and --

19 MR. HUSSAIN: That is --

20 MS. FOLEY GANNON: -- and the applicant's
21 suggesting that this be limited to those who -- employees
22 who are handling hydrogen; is that correct?

23 MR. HUSSAIN: That is correct.

24 MS. FOLEY GANNON: Thank you.

25 And for the final change and condition that we'd

1 like to discuss, I would also like to re-call Ms. Bellows
2 to the stand.

3 (Felicia Bellows was previously sworn.)

4 MS. FOLEY GANNON: Ms. Bellows, you are still
5 sworn.

6 MS. BELLOWS: Yes.

7 MS. FOLEY GANNON: Turning now to the proposed
8 changes to Worker Safety 7, can you describe the proposed
9 changes?

10 MS. BELLOWS: Yes. In Worker Safety 7, again,
11 this is an area going to cost. And when we took a look at
12 this, the increase was significant from the SA to the SSA.
13 Basically we're now being asked to pay a little over a
14 million up front and then a little over a million every
15 year for the life of the project. So it adds up to a very
16 significant amount.

17 So at the same time we got it, we received a
18 letter from the county, from San Bernardino County
19 analyzing -- sort of giving us backup information as to
20 how they arrived at that number and along with some of the
21 other facilities, the other solar generating facilities in
22 the area. And basically what they've done is just looked
23 at it from an overall megawatt perspective. So as we're
24 the largest megawatts, we, therefore, carry the largest
25 burden of, you know, of their breakdown of what they

1 believe they need. And what they failed to do was to look
2 at the specifics of the technology.

3 And one of the things that I asked Mike over here
4 to do for us is to take a look at the letter and see if it
5 made sense in terms of our technology. And one of the
6 aspects about the hydrogen supply is that each group of
7 9 megawatts, in other words, each 360 SunCatchers are
8 connected and they have valves on them. So any time
9 there's a drop in pressure in hydrogen, any issue with
10 hydrogen, basically it's all shut off around that, so you
11 have an isolated event.

12 So in the event that we have a problem on site,
13 on a SunCatcher, on a group of SunCatchers, they
14 automatically shut down, and it's an isolated event within
15 that 9 megawatt block. So rather than looking at this
16 from the perspective of it being a 850 megawatt facility,
17 we believe that it should be treated like a 9 megawatt
18 facility.

19 So Mike looked at this, at the letter from the
20 county; and actually, I have an example there of cost
21 associated with a 15 megawatt facility. And those costs
22 were in the letter, I believe, \$62,000 per year.

23 So our argument is that in the compliance
24 condition, what we would like to do is change the language
25 there so that we're given the ability to negotiate with

1 the County of San Bernardino or alternatively negotiate
2 with the Newberry Springs Fire Department. We understand
3 we're not in their jurisdiction right now, but in the
4 event that we were able to work out something along those
5 lines, we'd like to have the ability to do that; and
6 alternatively, look at as well, having our own fire
7 department on site if we determine that that's the most
8 cost effective and reliability means of supplying -- you
9 know, meeting that compliance condition.

10 MS. FOLEY GANNON: Thank you, Ms. Bellows.

11 One question for you, Mr. Hussain, which I think
12 I forgot to ask you earlier.

13 When you were doing the risk assessment, did you
14 also look at whether having the two hydrogen systems, one
15 north of the railroad, one south, as shown in this figure
16 94, would change your analysis about the potential
17 ramification under the worst-case scenario?

18 MR. HUSSAIN: Yes, I did. And we did a revised
19 analysis where we distributed the total amount of hydrogen
20 into two separate units, one comprising 67 percent of the
21 original amount, which was 23,000 pounds, and the second
22 one was the smaller unit comprising 33 percent of the
23 original amount.

24 MS. FOLEY GANNON: And what was your conclusion?

25 MR. HUSSAIN: The conclusion was that the impact

1 remains unchanged. The smaller units impact, worst-case
2 impact remains been the site boundaries and larger north
3 side does not impact any sensitive receptors.

4 MS. FOLEY GANNON: Thank you.

5 These witnesses are available for
6 cross-examination.

7 HEARING OFFICER KRAMER: Staff?

8 MS. HOLMES: Thank you.

9 As you heard Ms. Foley Gannon discuss earlier
10 this morning we received a copy of this map late
11 yesterday. It's my understanding that we still have some
12 questions about it. Rather than I ask them myself, I
13 think it would be easier if the committee would allow to
14 have the engineers ask questions about the engineering
15 details about the maps of the applicant's engineers.
16 Would that be acceptable to the committee and to the
17 parties?

18 HEARING OFFICER KRAMER: Yes, go ahead.

19 MS. HOLMES: Thank you.

20 Mr. Tyler, would you like to begin, and then
21 perhaps Dr. Greenberg who's also on the line would have
22 some additional questions.

23 MR. TYLER: Yes, thank you.

24 I guess I don't need to be sworn.

25 ///

1 CROSS-EXAMINATION

2 MR. TYLER: The first question I have is with
3 regard to the pressure --

4 HEARING OFFICER KRAMER: Okay. Hold on a second.

5 MR. TYLER: Okay. The first question I have, I
6 have heard, I believe it's Mr. Hussain stated that the
7 high pressure side in the compressor stations was going to
8 be 600 psi. I understood that would actually be 2760 psi.

9 MR. ALHALABI: And the response will come from
10 Mike Alhalabi, Mohamad.

11 The statement I made of the pressure being 600 is
12 true; it's 600. We provide hydrogen to our distribution
13 field at 600 pounds. We provide hydrogen to each one of
14 the PCUs as high as 2700 pounds. There are two -- there's
15 big differences between the two systems. I'm not --
16 should I explain further or -- okay.

17 So anyway, the makeup line mainly supports any
18 losses of hydrogen, and that is designed to provide
19 hydrogen at 600 pounds of pressure. So what we store in
20 the main storage tank, and we have two of those makeup
21 tanks, one on the north side, one on the south side, and
22 as Mr. Hussain said the total of 36,000 standard cubic
23 feet of hydrogen is split two-thirds, one third;
24 two-thirds on the north side, one-third on the low -- on
25 the south side. So those two units, those two tanks

1 mainly provide hydrogen to support SunCatcher groups of
2 9 megawatt each.

3 At the compressor level, at the distribution
4 level you have total of 95 compressors. Each compressor
5 takes hydrogen either from the low pressure storage tank
6 side at 600 pounds, and if the hydrogen there is not
7 sufficient enough due to loss in the system, leaks, the
8 makeup supply line will provide additional hydrogen to
9 make up -- to support the compressor at the compressor
10 level to take hydrogen from 600 pounds to as much as
11 27- -- 2760 pounds of pressure ready to provide PCUs with
12 hydrogen for power production.

13 HEARING OFFICER KRAMER: Okay. Hold on a second.

14 One of the unidentified callers on the telephone
15 is making a lot of your noise on your phone.

16 Can you -- it's not Dr. Greenberg, it's not the
17 staff in Sacramento. If you're making a lot of rustling
18 noises around your phone, if you could mute yourself, I
19 believe it's star six or -- we'd rather not mute you
20 because then we can't tell if you do need to speak at some
21 point.

22 Oh, it looks like they hung up. Good, thank you.

23 Go ahead.

24 MR. TYLER: Okay. I understand what you're
25 saying. It was my understanding that there's also

1 storage, that there's also tanks in each compressor unit
2 that store hydrogen at 27- -- roughly 2700 psi.

3 MR. ALHALABI: You are correct, yes, there is two
4 storage tanks at each compressor group, and those tanks
5 are rated either low pressure or high pressure tanks. And
6 these are the only two tanks that are there to support the
7 compressor at the compressor -- at the 9 megawatt
8 generating group level. So there's only two tanks out in
9 the field supporting each compressor. However, there are
10 two tanks supporting the whole field; like I said earlier,
11 these are makeup tanks. And we differentiate between the
12 two; one, we label it as makeup tank, makeup storage, and
13 the other two tanks are mainly either high or low pressure
14 tanks.

15 MR. TYLER: And how many standard cubic feet of
16 hydrogen are stored in the high pressure tank?

17 MR. ALHALABI: In the high pressure tank we
18 stated that at the compressor group we will have 29,333
19 standard cubic feet of hydrogen on the high side, and we
20 will have 9,900 standard cubic feet of hydrogen on the low
21 side.

22 MR. TYLER: Okay. That's consistent with the
23 description I had.

24 Also, I notice on your map, I still don't see the
25 locations of the 95 compressor group stations.

1 MR. ALHALABI: Yes, it's not possible to show
2 them on this drawing, however, our actual detailed
3 engineering design drawings show the actual field layout,
4 and each one of the compressor groups, the exact location
5 of each one of the pedestals and PCUs, and also supporting
6 compressor and storage facility. We can't squeeze more
7 than one million pieces of hardware on this drawing here.

8 MR. TYLER: Okay. Well, the reason I ask that is
9 that if any one of these compressor stations had a loss of
10 containment, the hydrogen can be released virtually in any
11 direction from the leak, and, therefore, we would get a
12 jet-type fire associated with that release. And it's
13 impossible, based on this drawing, to see if that type of
14 fire would impinge outside the boundaries or on the
15 railroad or the railroad right of way. So that's why we
16 were asking for that information. We really can't tell
17 from what we have here what might be impacted by that type
18 of release.

19 MR. ALHALABI: I can describe in details how the
20 equipment is laid out so you have better understanding of
21 hydrogen distribution and conclude -- and possibly agree
22 with me that the chances of what you just stated happening
23 is zero.

24 We start out with hydrogen above ground at the
25 storage tank level through compression fitting, and that

1 is your source of hydrogen release; it's because it's
2 compression fitting, that's your weak link. So if we can
3 control it at that point, we can actually eliminate and
4 isolate hydrogen supply from that source on forward.

5 And at that location I have installed and
6 designed excess flow valves that will control flow. Once
7 this valve senses flow higher than what the compressor is
8 calling for or the PCU is calling for, it will
9 automatically shut off, isolating hydrogen, what is in the
10 tank from the field. So the chances of hydrogen release
11 at that point, unless the valve itself leaks or fails,
12 which is possibility, and that's where you're going to
13 have fire; otherwise, that is provision mainly to prevent
14 hydrogen from leaking.

15 Past that point, we are going underground, we're
16 going with pipe, half-inch pipe trenched underground,
17 solid from one connection to the next connection above
18 ground. So you go from point A to point B underground,
19 solid tubing, there is no welds, there is no connections,
20 there are no fittings, there is no chance of the tube
21 itself leaking other than bursting. And burst pressure on
22 a half-inch line is about 12,000 pounds of pressure, while
23 our application will take it up to 2760 pound. We have
24 tested pipe at 3300 pounds of pressure and we held the
25 pressure for 24 hours; we had 100 percent satisfaction

1 with our test, the test passed no problems.

2 So again, from our storage tank on the makeup
3 side all the way to your compressor, it's mainly solid
4 tubing.

5 At the compressor level, of course, you're going
6 to have other connections, similar-type pressure fitting
7 between the compressor, low pressure tanks, and high
8 pressure tanks. Those points could be potential source of
9 leak. And there we have provisions both to control any
10 extreme high pressures or low pressures; high pressures
11 due to heat build up in the pipe due to sunlight hitting
12 the tubes heating what's in it. There are pressure
13 release valves that release pressure, minimizing any
14 pressure build up in the pipe.

15 So again, the only potential source of failure
16 would be the compression fitting itself, and that is
17 again, at the local level. We're not talking about the
18 whole site now, we're talking about one group out of 95
19 groups that could potentially fail. And if that fails,
20 the amount of hydrogen stored on the high side is 165
21 pounds of pressure -- I'm sorry, I mean 165 pounds of
22 hydrogen on the high side, and 56 pounds of hydrogen on
23 the low side.

24 Now, keep in mind what I'm talking about here is
25 165 pounds in comparison to 23,000 pounds of hydrogen on

1 site. So you're looking at minute amount of hydrogen at
2 each one of those locations.

3 MS. HOLMES: Perhaps I can interject at this
4 point.

5 Staff continues to want the additional
6 information in order to be able to evaluate whether or not
7 there's a potential hazard associated with this. A lot of
8 the information that you're referring hasn't been
9 presented, isn't shown on these maps. And I think this
10 may be another topic that we need to defer in order to be
11 able to ascertain the safety associated with this new
12 proposal to split the systems north and south.

13 Dr. Greenberg, do you have any -- anything
14 additional to -- that Mr. Tyler hasn't identified as
15 information that would be helpful to you in making this
16 assessment?

17 Alvin?

18 Mr. Tyler.

19 MR. TYLER: I would just say suffice it to say
20 staff would disagree with the characterization that the
21 only leak could occur at a compression fitting tanks.
22 Tanks have failures, lines have failures, things hit
23 lines; there are various reasons that you might have a
24 release. So suffice it to say we really need to know
25 where those compressor stations are and how close they are

1 to anything they could impact, such as the railroad or
2 anything outside the site boundaries.

3 MS. HOLMES: It sounds as though that information
4 is available, so perhaps if the applicant can provide that
5 to Dr. Greenberg and to Mr. Tyler and the other parties
6 who are interested in this topic, it's something we could
7 resolve relatively quickly and take up at the next
8 hearing.

9 MS. FOLEY GANNON: We will try to figure out a
10 way to meaningfully show that information. It won't work
11 on the scale of this drawing. We will have to figure out
12 some other way to be able to present that information, but
13 we'll figure it out.

14 MS. HOLMES: Electronic files would be fine, I
15 think.

16 MS. FOLEY GANNON: We'll figure something out.

17 MR. BABULA: Hey, Caryn, this is Jared. Alvin's
18 e-mailing on the WebEx that he has questions, but he lost
19 connection.

20 DR. GREENBERG: Hi, this is Alvin Greenberg.

21 MR. BABULA: Okay. Never mind.

22 MS. HOLMES: Hi, Dr. Greenberg, this is Caryn,
23 and what we've been doing is handling this fairly
24 informally, given the --

25 DR. GREENBERG: Yes, I have been listening. When

1 I went to reply that I do have questions, I lost the phone
2 connection.

3 MS. HOLMES: Why don't you just summarize the
4 kinds of information that you'd be looking for so the
5 applicant's got a heads-up and hopefully can get the
6 information to us quickly.

7 DR. GREENBERG: That would be agreed. I only
8 have three questions to add to what Mr. Tyler spoke of.

9 CROSS-EXAMINATION

10 DR. GREENBERG: I would like to know the
11 separation distance between the hydrogen generating system
12 and the hydrogen compressors. It's still unclear to me
13 whether or not those compressors are distant from the
14 hydrogen generating system; maybe some are, maybe some
15 aren't, I don't know. It's hard to tell.

16 Number two, I'd like to know the method of
17 hydrogen generation.

18 And number three, I'd like an estimate as to how
19 many workers would be within the off-site consequence
20 analysis impact area at any given time.

21 MR. ALHALABI: Mike Alhalabi will be responding
22 to all your three questions.

23 Number one, location of compressors, just
24 imagine -- I don't have exact figures to give you, but I
25 can give you a rough idea. If we --

1 MS. HOLMES: I think we'd rather -- let's just
2 get the information; we don't want the rough idea. I
3 think we've heard Mr. Tyler say he wants the exact
4 locations. So that's something that we're looking forward
5 to receiving. Ms. Foley Gannon indicated that we'll work
6 on ways to get it there, and we're happy to cooperate,
7 whatever way works, but we do want to see it, we don't
8 want the rough estimate.

9 MS. FOLEY GANNON: It sounds like, though, the
10 question -- the second question is how the hydrogen is
11 generated is probably something that we're not going to be
12 showing on the figure that would actually require a
13 response.

14 MS. HOLMES: Sure.

15 MS. FOLEY GANNON: Thank you.

16 MR. ALHALABI: Is generated through an
17 electrolysis machine; mainly you bring in water and you
18 provide electricity --

19 DR. GREENBERG: I'm familiar with electrolysis.
20 I just wanted to make sure that that's what you were
21 using.

22 MR. ALHALABI: Okay. Yeah, it's an electrolysis
23 machine, simple electrolysis machine that separates
24 hydrogen from oxygen.

25 DR. GREENBERG: Yes, sir.

1 MR. ALHALABI: And hydrogen is stored. And
2 oxygen is released into the atmosphere.

3 HEARING OFFICER KRAMER: Any other questions from
4 staff?

5 MS. HOLMES: No, I think that's it.

6 So it sounds to me as though this is another
7 topic that we'll be putting over. And as I said, we'll be
8 happy to figure out whatever -- whatever we can do to help
9 get the information to staff and get them reviewing it
10 quickly. We'd be happy to do that.

11 HEARING OFFICER KRAMER: Okay. Does any other
12 party have a question for this witness panel?

13 Mr. Lamb?

14 MR. LAMB: Thank you.

15 CROSS-EXAMINATION

16 MR. LAMB: Steve Lamb for BNSF.

17 Mr. Alhalabi, you referenced the alternative
18 delivery system by truck.

19 MR. ALHALABI: Yes.

20 MR. LAMB: Okay. First, have you had an
21 opportunity to review the testimony of Edward Phillips?
22 It's Exhibit 1201.

23 MR. ALHALABI: No.

24 MR. LAMB: Have you been advised -- I know you've
25 been advised of the issue that BNSF is concerned about

1 having hydrogen transported underneath the lines, right?

2 MR. ALHALABI: Correct.

3 MR. LAMB: And are you aware that there's a
4 similar concern about having hydrogen transported above
5 the lines?

6 MR. ALHALABI: No, I'm not aware of any concerns
7 by BNSF or any other party.

8 MR. LAMB: Okay. Well, maybe -- I don't know if
9 I can direct this --

10 MS. BELLOWS: The applicant is well aware of
11 that, and we will not be running the trucks across the
12 bridge in the north side to the south side.

13 MR. LAMB: Okay. Well, maybe we can short change
14 this, if it's okay with your counsel.

15 In relation to Mr. Phillips' testimony in that
16 regard, he proposed a number of conditions of
17 certification that I want to know if the applicant
18 believes they're reasonable.

19 MS. BELLOWS: I don't remember seeing that. I
20 would have to go back and look at the compliance
21 conditions.

22 MR. LAMB: Okay.

23 MS. BELLOWS: I doubt I have an issue with them,
24 but I don't recall them off the top of my head.

25 MS. HOLMES: I just -- this is Caryn Holmes for

1 the staff.

2 I'd just like to point out, as a general rule,
3 the staff believes that conditions of certification should
4 be related to items that we think are required for LORS
5 conformity or to mitigate CEQA impacts. So we would want
6 an opportunity to review them and make sure they don't
7 represent a private agreement between Burlington Northern
8 Santa Fe and Tesserera that isn't related to items within
9 the commission's jurisdiction.

10 MR. LAMB: Certainly; we understand that.

11 Well, one of the things that was of concern to
12 BNSF was obviously if you go with the two systems and
13 there's piping, that there would be two separate systems
14 north and south. My understanding is that there's
15 agreement on that.

16 MS. BELLOWS: There is agreement on that.

17 MR. LAMB: Okay. And is there agreement that
18 that would be subject to the staff's approval, an
19 appropriate matter for a condition of certification to
20 be -- I understand we're going to work some of these out
21 over the next week.

22 MS. BELLOWS: That's correct.

23 MR. LAMB: Okay. The second major issue was in
24 relation to what we had just discussed, which was not
25 transporting hydrogen over the line if you decide to use,

1 what I would call, the K-bottle truck transport.

2 MS. BELLOWS: That is correct.

3 MR. LAMB: And you'd agree with that also?

4 MS. BELLOWS: I agree we would still generate on
5 both sides of the railroad.

6 MR. LAMB: Okay. And then in addition, just
7 generally speaking, and this really is directed, I think,
8 to Mr. Alhalabi, there was a reference to a risk
9 assessment and a risk management plan. And Mr. Hussain
10 referenced both of those.

11 Are there differences between those two in your
12 mind?

13 MR. HUSSAIN: Risk management plan is a formal
14 regulatory document that provides an off-site consequence
15 for the worst-case scenario, amongst other things.

16 MR. LAMB: Okay.

17 MR. HUSSAIN: The risk assessment is a separate
18 process that calculates the risk posed by each of these
19 material.

20 MR. LAMB: Okay. Which is also required by
21 regulations and goes into the risk management plan,
22 correct?

23 MR. HUSSAIN: Correct.

24 MR. LAMB: Okay. My question is would it be
25 correct that in relation to the risk assessment, no risk

1 assessment has been done in relation to the potential
2 impact of a derailment?

3 MR. HUSSAIN: No.

4 MR. LAMB: And no impact in relation to rail
5 operations.

6 MR. HUSSAIN: If you are saying that impact
7 caused by derailment on a train to our system, no, that
8 has not been done.

9 MR. LAMB: Okay. That was kind of our last major
10 point, was that we would like to have that as a potential
11 condition of certification, obviously subject to the
12 staff.

13 MS. BELLOWS: And we are fine with that as well.

14 MR. LAMB: Okay. Do you actually have a
15 document, Mr. Alhalabi, that specifically locates on the
16 ground where each of the 95 -- I'll call them compressor
17 units are located?

18 MR. ALHALABI: Yes.

19 MR. LAMB: And I don't know if you -- subject to
20 your counsel, because we're talking about getting this, is
21 it electronic, is it a CAD, is there a way at that we can
22 get that?

23 MR. ALHALABI: Yes.

24 MR. LAMB: All right. Thank you, sir.

25 Do you also within that plan have the specific

1 location of each of the individual SunCatchers?

2 MR. ALHALABI: Yes.

3 MR. LAMB: And would that be available to us?

4 MR. ALHALABI: Yes.

5 MR. LAMB: Great. And would it be correct that
6 there has been no risk assessment done of a potential
7 release and/or explosion at any of the individual
8 95 compressor sites?

9 MR. HUSSAIN: That is not totally correct. We
10 have done a risk analysis for each of the high pressure
11 tank and each of the low pressure tanks, and the results
12 have been presented in our submittal, because those tanks
13 are the major storage within that system.

14 MR. LAMB: Those are located at the generation
15 site though, correct?

16 MR. HUSSAIN: No. Also at the various SunCatcher
17 pads.

18 MR. LAMB: These are the tanks that you were
19 referring to that are between 56 and 165 pounds of
20 pressure?

21 MR. HUSSAIN: That's correct.

22 MR. LAMB: Okay.

23 MR. HUSSAIN: That's not a pressure, that's a
24 weight.

25 MR. LAMB: Weight, I'm sorry.

1 Mr. Alhalabi, the tubing, the solid tubing, it
2 must be flexible, right?

3 MR. ALHALABI: Yes.

4 MR. LAMB: All right. Can you tell us what
5 material it's made of?

6 MR. ALHALABI: It's a 304 stainless steel.

7 MR. LAMB: All right. I don't have any further
8 questions at this time. Thank you.

9 HEARING OFFICER KRAMER: County?

10 CROSS-EXAMINATION

11 MR. BRIZZEE: This is Bart Brizzee from
12 San Bernardino County.

13 Mr. Alhalabi, at build out, how much total
14 hydrogen is going to be on site?

15 MR. ALHALABI: During construction or start up?

16 MR. BRIZZEE: Actually, after everything's built
17 that's proposed to be built.

18 MR. ALHALABI: 23,000 pounds of hydrogen.

19 MR. BRIZZEE: And this is going to be comprised
20 in these tanks, one north and south, plus the --

21 MR. ALHALABI: No.

22 MR. BRIZZEE: -- plus -- within the system.

23 MR. ALHALABI: It will be within the system, will
24 include two makeup tanks, 95 high-pressure storage tanks,
25 95 low-pressure storage tanks, and 34,000 PCUs, and all

1 the piping above ground and below grade.

2 MR. BRIZZEE: When you're talking about tanks,
3 these 95 tanks, can you give us a physical approximation
4 of about how big they'll be?

5 MR. ALHALABI: About 9 feet in diameter, and it
6 could be, it depends of course if we're talking about high
7 or low pressure, between 10 to 30 feet long.

8 MR. BRIZZEE: Do these look like propane tanks?

9 MR. ALHALABI: Similar to propane tanks.

10 MR. BRIZZEE: There was a question asked about
11 hydrogen. Mine had to do with is hydrogen -- why is it
12 hydrogen and not something else? Does this have some
13 properties that make it optimal for this kind of use?

14 MR. ALHALABI: Yes.

15 MR. BRIZZEE: And what is that?

16 MR. ALHALABI: It's best gas that you can use to
17 transfer heat from point A to point B.

18 MR. BRIZZEE: And I also take it that 600 --
19 well, the pressure varies, and, I'm sorry, I didn't quite
20 follow the technical aspect, but it's somewhere between
21 600 and 2700 pounds per square inch?

22 MR. ALHALABI: It's generated at as much as
23 138 pounds of pressure boosted to 600 for makeup
24 distribution, and it's boosted again to 2700 -- roughly
25 2700 pounds of pressure to load PCUs to generate power.

1 MR. BRIZZEE: So in the, I believe they're called
2 heater heads, where the actual work is being done, the
3 power's being generated, that's at 2700 psi?

4 MR. ALHALABI: No. It starts out at 2032 pounds
5 of pressure, and it goes as high as 3,000 pound of
6 pressure.

7 MR. BRIZZEE: So it varies through the system.

8 MR. ALHALABI: It varies because the sun is
9 heating it, and it's building up pressure. So we deliver
10 it to a certain pressure, but then the sun itself boosts
11 the pressure based on how much heat the sun is putting
12 into the heater head.

13 MR. BRIZZEE: All right. So we have in the
14 heater head hydrogen that's at this pressure you've just
15 indicated, plus it's at 12- to 1300 degrees --

16 MR. ALHALABI: Yes.

17 MR. BRIZZEE: -- is that right?

18 Do you believe that hydrogen under those
19 circumstances is more dangerous than hydrogen at room
20 temperature or however else it would be transported?

21 MR. ALHALABI: No, I don't believe that.

22 MR. BRIZZEE: So those temperature and those
23 pressures don't increase the risk of fire or --

24 MR. ALHALABI: Without a spark, you're not going
25 to have fire.

1 MR. BRIZZEE: But if you do have a spark at these
2 temperatures and pressures, is it a greater risk?

3 MR. ALHALABI: Yes, or even at 50 pounds or
4 10 pounds of pressure you're going to have higher risk of
5 fire once you have the spark.

6 MR. BRIZZEE: All right. I think this question
7 is to Mr. Hussain.

8 Did you, sir, have a role in preparing the AFC?

9 MR. HUSSAIN: Yes, I did.

10 MR. BRIZZEE: And was it you who prepared the
11 list of risks that will exist on the property both during
12 construction and during operation?

13 MR. HUSSAIN: Yes.

14 MR. BRIZZEE: Has there been anything that
15 happened in the process of working through this approval
16 that would make you change what those risks are?

17 MR. HUSSAIN: In terms of what? I mean, the
18 risks are what they are, they're based on a calculation.
19 Nothing has changed to make me go back and revisit that
20 except for the fact that hydrogen now is distributed into
21 two centralized systems.

22 MR. BRIZZEE: And maybe to be fair to you, I'm
23 talking about general itemized risks of falling,
24 electrocution, all of these things that were put in tables
25 in the AFC.

1 MR. HUSSAIN: I mean, it's not a formal process
2 of calculating risk for that.

3 MR. BRIZZEE: But the risks are the same today
4 as --

5 MR. HUSSAIN: Yes, yes.

6 MR. BRIZZEE: -- they were when you were looking
7 at the project to prepare the AFC, correct?

8 MR. HUSSAIN: That is correct.

9 MR. BRIZZEE: This is a question for Ms. Bellows.
10 You said that the county provided you a study or
11 a letter related to the impact cost to fire from the
12 renewable energy projects that are within the county.

13 MS. BELLOWS: That's correct. They had a study
14 done by an outside consultant.

15 MR. BRIZZEE: And just to be clear, there was a
16 breakdown in there, was there not, of what should be
17 allocated to the residential development, commercial
18 development, and industrial development?

19 MS. BELLOWS: I believe that's the case.

20 MR. BRIZZEE: And then on the industrial
21 development, was there not a further breakdown so that not
22 all the load was being placed upon the solar projects?

23 MS. BELLOWS: That's correct.

24 MR. BRIZZEE: Now, you indicated, and I believe
25 it's based on the risk assessment from the other

1 witnesses, that this project should not be evaluated based
2 on its overall megawattage because the realistic risk is
3 that only one system, one of these 95 systems would fail
4 at a time.

5 MS. BELLOWS: That's based on an analysis of the
6 different technologies. So, for instance, when you
7 compare a -- if you're looking at a trough technology,
8 trough has a steam generator, so if you're looking at
9 that, then you know you have a particular megawattage
10 associated with that. So there's a block. In that
11 instance you may have two blocks. If they were -- if I
12 were them, and they were coming back to you, I would make
13 the argument that I had at least two systems, right,
14 depending on how many generators you had there.

15 In our instance, you know, we can isolate it down
16 to 9 megawatt blocks; and, in fact, that's the way we
17 construct our facility and actually hook up to the grid,
18 is we connect in 9 megawatt blocks.

19 MR. BRIZZEE: All right. Now, the responsibility
20 of the fire department though would go beyond just looking
21 at the risk associated with one block. And by that I
22 mean, you have a number of employees based on the total
23 size of the project.

24 MS. BELLOWS: Correct, we have employees on the
25 site.

1 MR. BRIZZEE: But you have more employees on site
2 for an 850 megawatt project than you would for a
3 9 megawatt project.

4 MS. BELLOWS: Correct. But there are a number of
5 efficiencies gained with size.

6 MR. BRIZZEE: But risk to employees isn't one of
7 them, is it?

8 MS. BELLOWS: No; but, for instance, we don't
9 need at a certain point, and this is one of the things
10 that we got into when we were talking about the whole
11 difference between 275 megawatts and 850 megawatts, is
12 that I don't need as many employees, it's not on a
13 per-megawatt basis, it kind of jumps in blocks, if you
14 will.

15 MR. BRIZZEE: Also, there's going to be -- if I
16 read the documents correctly, one of the things you're
17 going to be looking to San Bernardino County Fire
18 Department is regular fire inspections?

19 MS. BELLOWS: That's correct.

20 MR. BRIZZEE: And would you agree with me that
21 it's going to require more inspections for this total
22 project than just to look at it as just a 20 megawatt
23 project?

24 MS. BELLOWS: No, that's correct.

25 MR. BRIZZEE: Maybe this is to the entire panel.

1 Are any of you aware of any solar power plant
2 fires that have taken place, in fact, in San Bernardino
3 County?

4 MR. ALHALABI: I'm not aware of any, period.

5 MS. HOLMES: I'm sorry, we're having trouble
6 hearing the answer.

7 MR. ALHALABI: This is Mike Alhalabi.

8 I'm not aware of any fires to any solar power
9 plant, not only in San Bernardino County, but anywhere in
10 the southwestern corner of the United States.

11 MR. BRIZZEE: And the rest of the panel?

12 MS. BELLOWS: I do not know the details of the
13 one, but it's my understanding that there was one, the one
14 that's sort of out somewhere near our site.

15 MR. BRIZZEE: Would that be the SEGS VIII or the
16 Daggett?

17 MS. BELLOWS: It was the power tower, let's put
18 it that way.

19 MR. BRIZZEE: Question for the panel also.

20 Do any of you know what the two-in two-out
21 principle is?

22 MS. BELLOWS: I do not.

23 MR. HUSSAIN: I don't either.

24 MR. BRIZZEE: Thank you.

25 No other questions.

1 HEARING OFFICER KRAMER: Thank you.

2 CURE?

3 MS. MILES: No questions.

4 HEARING OFFICER KRAMER: She said no questions.
5 Newberry Community Services District?

6 MR. WEIERBACH: I don't have any questions of
7 this panel, but I will raise some questions for
8 clarification before we're finished with this section with
9 staff. And I have requested to also call a witness.

10 HEARING OFFICER KRAMER: Right. And we're
11 getting to that.

12 Okay. So that will -- do you have a question?

13 COMMISSIONER EGGERT: Yeah, I do.

14 This does relate to the system.

15 So I guess just as a matter of background, within
16 the last couple weeks I was driving in a vehicle that
17 contained hydrogen at 10,000 psi; the tank was basically
18 right under the passenger seat. And the State of
19 California has been involved in co-funding a number of
20 projects for hydrogen stations in urban areas,
21 Santa Monica, Newport Beach, West Sacramento, all of which
22 contain hydrogen at 10,000 psi, deliver it to the vehicle
23 either at 10,000 or 5,000. So clearly this is a gas that
24 does have its associated dangers, has to be treated with
25 proper respect and all of the appropriate codes and

1 standards need to be followed for it to be used safely.
2 And in industrial, particularly, there's a, you know,
3 very, very long history of this being used safely when
4 used within properly-designed systems.

5 So I guess my question is I assume that you
6 intend to follow all of the standard practice of NFPA and
7 the use of ASME seal tanks and all of the required setback
8 distances between generation and compression; is that
9 correct?

10 MR. ALHALABI: Yes, correct. As a matter of
11 fact, our specifications call for all equipment suppliers,
12 construction companies to comply with all local, state,
13 federal rules and regulations, and also standards that are
14 by the American Society of Mechanical Engineers and ASTM
15 and ANSI, and boiler codes. I mean, we have pages and
16 pages of code requirements and code qualifications and
17 areas where they have to meet all those requirements.

18 Not only am I a licensed professional engineer,
19 but I've been an member of the American Society of
20 Mechanical Engineers for more than 28 years. And I'm
21 well-versed on their codes, whether it's a boiler code or
22 flammable liquids, gases, you name it. I want to make
23 sure that they are in compliance with all those codes.

24 COMMISSIONER EGGERT: Okay. And I guess this is
25 a question for staff, either Mr. Greenberg or others.

1 I guess I'm trying to figure out what level of
2 information and detail is necessary to make your
3 determination in terms of the risks that would be posed by
4 this facility. And I know you're going to have further
5 discussion on that, but is it things like PNID drawings,
6 or sort of what level of detail do you normally require?

7 MS. HOLMES: Commissioner Eggert, we actually
8 have a question prepared that goes to that very issue
9 during our direct examination. The witnesses haven't been
10 sworn, they could, and they could answer it now, or we
11 could get to it when we do our direct.

12 COMMISSIONER EGGERT: I'm willing to go either
13 way. If you want to handle it in direct, that's fine.

14 And hold on a second.

15 MS. WHITE: Just one clarification.

16 Looking at the design for Phase II, how are you
17 actually going to get the hydrogen from Phase II in the
18 middle of the project site, lower portion to Phase II on
19 the far west side across the NAP Area 3?

20 MS. BELLOWS: We are going to be running --
21 again, that will be via some piping that goes over here.
22 We have a -- with Elementus, that land that's owned in --
23 it's called Area 3, Section 9. It will be going along our
24 road there and underneath the ground piped over to the
25 face on the farther side, if we end up going with a

1 centralized system.

2 COMMISSIONER EGGERT: Okay. I have no further
3 questions, but I'll maybe hold some for staff.

4 HEARING OFFICER KRAMER: Okay. I think we've
5 exhausted the cross for this panel.

6 Any redirect?

7 MS. FOLEY GANNON: I have one redirect.

8 REDIRECT EXAMINATION

9 MS. FOLEY GANNON: Does the SunCatcher technology
10 require Therminol or any other natural gas as part of its
11 operation?

12 MR. ALHALABI: I read the study that some company
13 used helium gas. It wasn't as effective. So as far as I
14 know, and as far as Stirling Energy Technology and Tessera
15 Solar, we've only used hydrogen gas.

16 MS. FOLEY GANNON: So as it's designed, it will
17 not use Therminol or another natural gas; is that correct?

18 MR. ALHALABI: No.

19 MS. FOLEY GANNON: Thank you.

20 HEARING OFFICER KRAMER: Okay. Thank you.

21 We'll now go to staff's witness panel.

22 MS. HOLMES: Thank you.

23 Before we begin, I'd like to inquire as to
24 whether Assistant Chief Peter Brierty is on the line.

25 MR. BRIERTY: Yes, I am. This is Peter.

1 MS. HOLMES: Thank you very much.

2 What I'd like to do, I think, is have all three
3 witnesses called as a panel. I'll begin with haz mat and
4 then move into the worker safety fire protection area,
5 which is obviously Assistant Chief Brierty's area of
6 expertise, but I think it would be best to have everybody
7 sworn and empanelled at the same time.

8 HEARING OFFICER KRAMER: Okay. So that's
9 Dr. Greenberg?

10 MS. HOLMES: And Rick Tyler.

11 HEARING OFFICER KRAMER: Okay. And --

12 MS. HOLMES: And then Assistant Chief Brierty.

13 HEARING OFFICER KRAMER: Okay. Mr. Brierty,
14 could you spell your last name for us?

15 MR. BRIERTY: Yes. It's B-r-i-e-r-t-y.

16 HEARING OFFICER KRAMER: Thank you.

17 Okay. If the three of you could be sworn, raise
18 your right hand, please.

19 (Alvin Greenberg, Rick Tyler, and Peter Brierty
20 were sworn.)

21 MS. HOLMES: Thank you.

22 DIRECT EXAMINATION

23 MS. HOLMES: Mr. Tyler and Dr. Greenberg, were
24 you responsible for preparing the hazardous materials and
25 worker safety and fire protection sections of Exhibit 300?

1 MR. TYLER: Yes.

2 DR. GREENBERG: Yes.

3 MS. HOLMES: Excuse me, I think we're going to
4 have to do the sharing a microphone thing again. Hold on
5 again just a second.

6 HEARING OFFICER KRAMER: Where are you folks
7 today?

8 MS. HOLMES: We're in Hearing Room B, and only
9 one mic at a time works. And it's not working very well
10 to turn them off and on quickly, so give us 30 seconds.

11 HEARING OFFICER KRAMER: It's not supposed to
12 work that way.

13 MS. HOLMES: So we've been told.

14 Okay. I think we are ready.

15 And, Dr. Greenberg and Mr. Tyler, was a statement
16 of your qualifications included in Exhibit 300, the
17 supplemental staff assessment?

18 DR. GREENBERG: Yes.

19 MR. TYLER: Yes.

20 MS. HOLMES: And, Assistant Chief Brierty, can
21 you please explain who you work for and what your role is?

22 MR. BRIERTY: Yes. I work for the San Bernardino
23 County Fire District, which is a district in the
24 San Bernardino County. I'm the assistant chief assigned
25 to renewable energy projects, but my background and my

1 responsibility is for fire protection and hazardous
2 materials management of all of these projects.

3 MS. HOLMES: Thank you.

4 I'm going to turn first to the hazardous
5 materials management section. And either Mr. Tyler or
6 Dr. Greenberg can answer this.

7 We had quite a bit of discussion earlier today
8 about the new proposal for a split hydrogen system. Can
9 you please -- and you also heard some questions or
10 comments from Commissioner Eggert about the fact that
11 hydrogen is frequently used in -- for transportation uses
12 and for industrial purposes.

13 And can you please explain why it is that
14 hydrogen, the using of hydrogen is a concern for this
15 particular project?

16 HEARING OFFICER KRAMER: And you're going to have
17 to identify yourselves each time you speak so that you get
18 credit in the transcript.

19 MS. HOLMES: Don't be shy.

20 DR. GREENBERG: Who did you address it to?

21 MR. TYLER: This is Rick Tyler.

22 Yes, I would agree that hydrogen can and is
23 frequently handled or most of the time is handled in a
24 safe manner and doesn't result in impacts; however, this
25 is a pretty innovative system, it's unique to this

1 facility. There will be a lot of piping, a lot of tanks,
2 and a lot of people working around this equipment.

3 As most of you know, any piece of equipment can
4 fail, it can fail for many reasons. It can fail because
5 the humans operating it make a mistake. It can fail
6 because the equipment is not properly designed. So there
7 is always the possibility or the risk that a -- some sort
8 of loss of containment would occur and that there would be
9 a fire at some location. And, in fact, depending on the
10 direction of the release, the fire would basically burn in
11 that manner in some sort of a jet release, which would be
12 typical for a hydrogen event.

13 I do not believe that there is any real plausible
14 potential of an explosion with hydrogen because -- well,
15 this has been analyzed by many people, and "Lees' Loss
16 Prevention in the Process Industries" has a detailed
17 discussion on this. And basically hydrogen has only
18 exploded where there's a very energetic charge to start
19 with. It could explode in confined environments, but we
20 don't have it there, but we're still concerned about the
21 risk of fires, and the fires being close enough to the
22 rail line or to some other combustible material, grass or
23 anything else off the site that could lead to or
24 escalation throughout the facility as a result of
25 impingement of fire on other equipment.

1 MS. HOLMES: And you heard, I believe,
2 Commissioner Eggert ask the applicant whether or not they
3 were going to comply with all applicable LORS.

4 Has staff recommended that in addition to
5 compliance with the applicable LORS, that additional
6 safety measures be followed?

7 DR. GREENBERG: This is Alvin Greenberg.

8 Let me respond to that seeing as how I did write
9 the proposed conditions of certification. And let me also
10 add may response to what Mr. Tyler just testified to.

11 While it is true that there is experience in
12 working with hydrogen gas and in relatively large
13 quantities, say, at refineries, there are some particular
14 properties of hydrogen gas that render it very dangerous.
15 And the first of which, it is odorless, it's colorless,
16 you can't even see the flame usually. And it has one of
17 the largest ranges between the LEL, that's a lower
18 explosive level, and the UEL, the upper explosive level.

19 The range for hydrogen gas is from 4 percent in
20 air up to 75 percent in air. Just taking methane, which
21 is mostly what's found in natural gas, which is what we're
22 used to at the energy commission, that range goes from 5
23 to 15 percent. Gasoline goes from 1.4 percent to 7.6
24 percent. So hydrogen has one of the widest ranges of all
25 the flammable and explosive gases when it comes to lower

1 or upper concentrations that can explode.

2 Nevertheless, I do agree with Mr. Tyler that the
3 chances of an explosion in this circumstance, as we know
4 what the project is going to be comprised of, certainly my
5 opinion could change when we get additional information,
6 but at least as it stands right now, I agree with
7 Mr. Tyler that the chances of explosion is remote, are
8 remote. Nevertheless, we have here a huge amount of
9 hydrogen on a site with still as yet undefined mechanisms
10 for the location of various components.

11 The applicant still hasn't decided which
12 methodology they're going to use for supplying hydrogen
13 gas, so we are still a little bit in the dark as to what
14 had project will actually look like.

15 Now, we do know that the amount of hydrogen that
16 would be on site, 34,000 pounds, is a very high number.
17 Just to put that in perspective, the federal Department of
18 Homeland Security Chemical Facility Anti-terrorism
19 Standard lists hydrogen gas as a chemical of interest.
20 And says the threshold for getting into their risk
21 assessment program and their -- and requiring security, is
22 10,000 pounds of hydrogen on a site. This site,
23 obviously, is going to have 3.4 times that amount. So
24 even the officials at the Department of Homeland Security
25 are going to sit up and take note of any power plant,

1 solar power plant in California that has this amount of
2 hydrogen.

3 Now, towards that, staff has proposed certain
4 conditions of certification that are different than what
5 the other solar power plants that are using other types of
6 heat transfer fluid, whether they be Therminol or some
7 other one, such as at the Rice Solar Power Plant, that is
8 a salt mixture, and rather than go into all of these, I
9 would point you to condition -- condition of
10 certification, here, let's see, number 8 I believe it is.
11 Give me a second, I'm scrolling. You can't see me scroll
12 here.

13 Caryn, do you have haz mat open?

14 MS. HOLMES: I do.

15 DR. GREENBERG: Give me the right page here,
16 please.

17 MS. HOLMES: Which one are you looking for,
18 Dr. Greenberg?

19 DR. GREENBERG: It looks like I found it. Okay.

20 Somebody's talking and not muting their phone.

21 Okay. On page C.5-28, the proposed condition
22 HAZ 7 that is new for any power plant -- we're hearing
23 somebody talking in the background that's interfering with
24 my ability to talk.

25 Caryn?

1 MS. HOLMES: Yes, I'm hearing somebody as well.
2 Are the people in Barstow hearing the background
3 noise?

4 HEARING OFFICER KRAMER: It looks like it's
5 Mr. Viseur in the end. So we're going to have to mute
6 him.

7 MS. HOLMES: Continue, Dr. Greenberg.

8 DR. GREENBERG: Thank you.

9 So HAZ 7 is new and has not been proposed for any
10 similar project except for, of course, the sister project
11 there in Imperial Valley Solar. And also looking at
12 proposed condition HAZ 8, they will be -- the applicant
13 here will be required to prepare a process safety
14 management plan. And within that OSHA regulation, it
15 gives the applicant the -- or it gives the writer of the
16 process safety management plan the opportunity to pick one
17 of several different types of methodologies to conduct a
18 hazard analysis. Here staff is singling out one, it's
19 known as the hazard and operability study, otherwise known
20 as HAZ OP. And we are asking that the committee require
21 the applicant -- the project owner to use that particular
22 methodology as opposed to other methodologies and, second
23 of all, to retain an independent outside third-party group
24 of professionals to conduct review and analysis of the
25 process safety management plan that includes the HAZ OP

1 study. We think that this information is critical to the
2 safe function of this power plant.

3 As you know, staff is unfamiliar with this type
4 of technology in that it has not been proposed for
5 California before. We think that this is a very good
6 method to ensure that all the possible hazards are
7 identified and then addressed through engineering
8 controls. We do not want to have to rely on emergency
9 response, yet emergency response is indeed needed because
10 we know that even though we're planning to avoid a release
11 of hydrogen and avoid a fire, we know from past
12 experiences when new technology comes online, that there
13 are indeed problems, there are releases, there are fires.
14 We have had at least one major fire in each of the three
15 existing solar power plants in their history of operating
16 in California.

17 So while we are -- go ahead, Ms. Holmes.

18 MS. HOLMES: Finish your answer, please.

19 DR. GREENBERG: I just wanted to sum up by saying
20 that we are proposing some conditions of certification to
21 help ensure a safe operation, but it will not guarantee a
22 safe operation; and so the second leg of the OSHA triad is
23 emergency response, and that is appropriate as well as the
24 engineering controls. So it's prevention and adequate
25 timely response that will allow this power plant to

1 operate safely and effectively.

2 MS. HOLMES: Thank you.

3 And I believe we're going to get to emergency
4 response in another moment or two.

5 I have one question for, I think it's for
6 Mr. Tyler, although Dr. Greenberg can chime in.

7 You heard a question earlier this afternoon from
8 Commissioner Eggert about the level of detail that's
9 needed. Could you please explain what additional -- the
10 level of detail at which you want the additional
11 information provided and how you will use it, Mr. Tyler?

12 MR. TYLER: Yes. We really -- primarily we need
13 the location of the compressor stations in the field. We
14 need to know the proximity of those compressor stations to
15 the rail line, to roads to the site boundary. We need
16 that information so we can determine if there are any
17 impacts to any public receptor that would result from an
18 accidental release of hydrogen at any of those locations.
19 And we can't really assess those risks without knowing
20 those proximities.

21 MS. HOLMES: Thank you.

22 And one more question before we move on to fire
23 protection.

24 I'd like to run through very, very quickly the
25 applicant's proposed changes to the hazardous materials

1 conditions of certification. They proposed changes to
2 HAZ 2, HAZ 5, and HAZ 7.

3 Dr. Greenberg, does staff support the proposed
4 change to HAZ 2?

5 DR. GREENBERG: Yes, I have no problem with their
6 proposed change to HAZ 2.

7 MS. HOLMES: And does staff oppose the proposed
8 change to HAZ 5?

9 DR. GREENBERG: Yes, we do. I understand what
10 they're trying to propose there, however, it defeats the
11 purpose of having a secure facility if only some of your
12 workers are vetted and others are not. And it is not a
13 burdensome vetting to comply with this proposed condition
14 of certification.

15 MS. HOLMES: And does staff agree with the
16 proposed change to HAZ 7?

17 DR. GREENBERG: Yes.

18 MS. HOLMES: Finally, before we move on to worker
19 safety and fire protection, I'd like to let the parties
20 and the committee know that staff has prepared its traffic
21 and transportation section, which we hope to file on
22 Monday. We have discovered new information about train
23 traffic that will be addressed, having to do with the
24 transport of hydrogen. I think this is similar to some of
25 the issues we heard discussed earlier this afternoon, and

1 that will be provided on Monday as well.

2 With respect to worker safety and fire
3 protection, Dr. Greenberg, would you like to prepare a --
4 would you like to give a brief summary of staff's
5 testimony on worker safety and fire protection and then
6 provide a response to the applicant's proposed changes of
7 certification?

8 DR. GREENBERG: Yes, I'd be happy to.

9 Staff has conducted what could reasonably be
10 called an exhaustive investigation into the impacts of not
11 just this solar power plant but the other proposed power
12 plants for San Bernardino County and also for the other
13 counties; that would be Riverside County, Imperial County,
14 and Kern County. But perhaps far and away the best
15 analytical approach that staff has seen in 15, 16 years
16 was conducted by the San Bernardino County Fire
17 Department, which based its allocation for this particular
18 solar project to mitigate direct and cumulative impacts on
19 an approach that staff initially developed. This is the
20 staff emergency response matrix that we developed first to
21 give a quantitative approach, the quantitative value for
22 the need for mitigation, you know, to mitigate impacts to
23 the fire department.

24 San Bernardino County Fire Department then took
25 staff's matrix, modified it a little bit, and used it as

1 part of their process with their own consultant to flesh
2 out, if you will, a reasonable analytical methodology to
3 assess appropriate share of impacts to the various power
4 plants that are in the planning stages in San Bernardino
5 County. This included solar power plants that are before
6 the energy commission as well as those that are
7 photovoltaic and not before the energy commission. They
8 did not use megawattage as their sole basis; in fact, that
9 is only a small factor that modifies the results of the
10 decision of the emergency response matrix that staff had
11 developed. Nevertheless, the county did include part --
12 some of the megawattages, part of a multiplier.

13 Now, the county determined what it needs to be
14 irrespective of solar power plants. It then used a metric
15 to apply the cost of providing those needs in the future
16 to the solar power plans, all of them, including the PVs,
17 and they came up with a figure of 29 percent that was
18 based on calls from various sectors of society, of their
19 service area in the year 2009. That 29 percent then was
20 further allocated to each individual project.

21 I think what's important to note is that this
22 allocation is based on the need for five different types
23 of services that will be provided to the Calico project if
24 it is certified and built.

25 First is the need for inspections and permitting.

1 Second is the need for fire response. And one
2 must keep in mind that this is a vast facility with
3 approximately 30 miles of fence line; it also adjoins
4 Interstate 40, and, of course, there's a railroad cutting
5 through the middle. So the need to have proper fire
6 response in a very large and significant and timely manner
7 is very appropriate for this particular site.

8 There could also be a haz mat spill. In this
9 case that would be downgraded as opposed to those
10 facilities that are using a liquid heat transfer fluid as
11 opposed to, in this case, a gaseous heat transfer fluid.
12 Nevertheless, there's still going to be some gasoline and
13 some diesel on this site.

14 Third, there's rescue, either during construction
15 or during operations. The fire department needs to get
16 there and needs to respond with enough people to effect
17 rescues. Let's say it's during a trenching and excavation
18 operation. They need to be able to get those workers out
19 of that trench.

20 And then fourth is emergency medical response.
21 And they do need to be able to respond in what the fire
22 department personnel and professionals call "the golden
23 hour." Your chances of saving somebody fall off
24 dramatically unless you can get to them and provide at
25 least paramedic level emergency medical response.

1 So given those five areas, staff weighted those
2 as a comparison to the other projects, and Calico came up
3 with a certain score, as did other projects such as
4 Abengoa. And then two of the existing solar power plants
5 in San Bernardino County were also included in there to
6 show in comparing contrasts.

7 The approach used by the San Bernardino County
8 Fire Department, therefore, does not rely on population or
9 number of employees, but does rely on professional
10 judgment as to what would be needed to adequately respond
11 in an adequate amount of time.

12 Let me add for the moment here, because there is
13 an intervenor, that I do not believe that this facility,
14 the Calico facility, falls within the jurisdiction of the
15 Newberry Springs Fire Department. The San Bernardino
16 County Fire Department conducted a thorough review of the
17 land documents, and it is clearly within the jurisdiction
18 of San Bernardino County Fire Department; therefore, for
19 the applicant or the project owner to negotiate with
20 another fire department for provision of services would,
21 in my opinion, be a violation of LORS. It would be a
22 violation of the California Fire Code because the
23 California Fire Code does refer to the authority having
24 jurisdiction. And in this case, that authority is the
25 San Bernardino County Fire Department. So that is a LORS

1 issue. And certainly I would support the authority having
2 jurisdiction, whoever that may be; and in this case it
3 happens to be San Bernardino County Fire Department.

4 MS. HOLMES: Thank you.

5 I'd like to ask, Dr. Greenberg, did you rely in
6 part on what's been referred to as the Hoffman Report, and
7 then identified as Exhibit 302?

8 DR. GREENBERG: Yes, I did. And that is the
9 report upon which the San Bernardino County Fire
10 Department based its analysis. And as you can see from
11 there, the Hoffman Report does indeed rely on an emergency
12 response matrix, and staff was the author of that matrix,
13 not the exact matrix, but say 90 percent of the matrix was
14 taken from staff's matrix, and the other 10 percent was
15 San Bernardino County Fire Department making a -- some
16 revisions to suit the specific situation of
17 San Bernardino County.

18 But as you also note, staff didn't rely 100
19 percent on the Hoffman Report. We do conduct our own and
20 we did in this case review and evaluation. And I do
21 concur with the Hoffman Report and the costs and the
22 allocation factor, et cetera.

23 MS. HOLMES: Thank you.

24 Mr. Tyler, do you have anything to add briefly to
25 that discussion about worker safety and fire protection?

1 MR. TYLER: Yes. I would just like to add that
2 staff's primary concern is a potential impact to public
3 safety. That impact results from the effect on the fire
4 department when there are events at a facility like this.
5 And in particular, we're concerned with fire departments
6 that are already stretched to the limit and even beyond
7 the limit, and the fact that incidents can result in
8 what's known as drawdown or exhaustion of fire protection
9 services, which means that the community that relies on
10 those services on a daily basis is left holding the bag
11 when there's an incident at a large facility like this if
12 they are not prepared to respond properly.

13 MS. HOLMES: Thank you.

14 And now I'd like to turn to the proposed changes
15 to the conditions of certification.

16 Mr. Tyler, the applicant proposed to delete
17 language from worker safety. Do you have a response to
18 that proposal?

19 MR. TYLER: Yes. That proposal basically simply
20 requires that -- our language in that condition simply
21 requires that the applicant consider the potential impacts
22 on workers associated with high-intensity light that might
23 be reflected from the mirrors in the facility.

24 It's my belief that the applicant or the --
25 whoever the owner is, whoever employs people to work at

1 this facility has an obligation to inform them of hazards
2 at the site and protect them from those hazards. We're
3 not suggesting any specific type of protective equipment
4 and mitigation strategy, we're simply saying that when the
5 applicant or the owner develops a safety plan or illness
6 injury prevention plan for workers at the site, that they
7 can consider the potential for injury that could result
8 from exposure to that reflected light.

9 Unfortunately, staff is relying on some
10 information that was -- that is being provided later in
11 the traffic and transportation analysis. That information
12 is not available at this time to docket. So we can
13 perhaps deal with this in more detail when that
14 testimony's available.

15 MS. HOLMES: Mr. Tyler's referring to the glint
16 and glare report, which I think actually is going to be
17 filed as -- (phone reception cutting out) -- testimony on
18 Monday with the other pieces. And as we had indicated on
19 Wednesday when these hearings began, we would anticipate
20 bringing, if there are still concerns about this
21 particular topic, making Mr. Tyler available at the later
22 hearing to address specifically the relationship between
23 this condition and the glint and glare report.

24 With that, Mr. Tyler, does staff support the
25 applicant's proposed change to Worker Safety 6 -- excuse

1 me, Dr. Greenberg, shortening from 60 days -- from
2 30 days -- lengthening from 30 days to 60 days?

3 DR. GREENBERG: That is just fine for Worker 6.

4 MS. HOLMES: Thank you.

5 At this point what I'd like to do is invite
6 Assistant Chief Brierty to offer comments about the
7 testimony that he's heard today and on telephone to
8 respond to the applicant's proposal that they be allowed
9 to consider either obtaining fire protection services from
10 Newberry Springs or providing their own fire service
11 protection.

12 Assistant Chief Brierty, could you respond to
13 that, please?

14 HEARING OFFICER KRAMER: He's here in the room.
15 I just realized that.

16 MR. BRIERTY: Good afternoon. Peter Brierty with
17 San Bernardino County Fire, assistant chief. Thank you
18 very much.

19 MS. HOLMES: Could you speak up, please?

20 MR. BRIERTY: Yes, I'm sorry. Right in there,
21 rock star.

22 Peter Brierty, San Bernardino County Fire
23 Department.

24 COMMISSIONER EGGERT: Good to see you again,
25 Mr. Brierty.

1 MR. BRIERTY: Thank you very much.

2 It's not only the fire department but the County
3 of San Bernardino really appreciates the opportunity to
4 speak here today, and we appreciate the support of the
5 staff. And we recently met with Calico, and we look
6 forward to working with them in the not too distant future
7 to iron out several issues that have been mentioned today.

8 With regards specifically to Newberry Springs,
9 San Bernardino County does not have the ability nor the
10 authority nor the -- well, we'll leave it at that -- in
11 terms of abdicating or turning over our fire response and
12 public health safety responsibility to Newberry Springs.
13 We work very closely with them on any number of incidents;
14 but jurisdictionally, this is our jurisdiction, and it's
15 our responsibility, and we will take care of that.

16 With regard to some of the other issues that were
17 mentioned today, we look forward to working with Calico
18 and receipt of not only their chemical process safety plan
19 but also what would be required under having more than
20 10,000 pounds of hydrogen, the risk management plan that
21 would be required both federally and under California law.
22 So we'll be working with them on that.

23 With regard to the size of the facility that was
24 presented in the Hoffman document, the size was there
25 because we're anticipating many, many more types of

1 facilities like this. This was the only one of the nature
2 of hydrogen; but within each group hydrogen, Therminol,
3 steam, and photovoltaic, the size of those individual
4 technologies is relevant in terms of one being smaller
5 than another.

6 We'll take, for example, Abengoa, that may have a
7 couple million gallons of Therminol. Well, if a project
8 comes along with a hundred thousand gallons of Therminol,
9 well, there's a substantially different hazard and a
10 substantially different risk associated with the smaller
11 volume. The same with hydrogen. A much larger
12 megawattage would generally have much higher volumes of
13 hydrogen.

14 So the size in the Hoffman Report deals with each
15 individual technology, and the fact that the more of that
16 substance or process that you have, the higher you would
17 expect the hazard and risk to be. So it is important that
18 we maintain that element in the overall decision. It
19 isn't the deciding factor; the risk matrix was a
20 significant factor. And if you'll look in there, you'll
21 see that Therminol did get a higher rating because it is a
22 liquid, it has the ability to go on the ground and be very
23 mobile. Hydrogen got a lower ranking because of the
24 characteristics that you heard today.

25 MS. HOLMES: Assistant Chief Brierty, would you

1 recommend that the energy commission allow this applicant
2 to provide its own fire protection services, emergency
3 response, hazardous material response?

4 MR. BRIERTY: In dealing with several thousand
5 facilities within the County of San Bernardino that handle
6 various types and all -- basically all different types of
7 hazardous materials, we certainly encourage initial
8 response by the facility and having prepared, trained, and
9 well-qualified staff to respond to the specific nature of
10 the chemicals or hazards associated with their facility.
11 So we certainly encourage it. But we do not see it as a
12 replacement or a mitigation as of yet to professional
13 firefighter response.

14 MS. HOLMES: Are you familiar with staff's
15 proposed condition of certification, Worker Safety 7?

16 MR. BRIERTY: Yes, I am.

17 MS. HOLMES: Do you support that proposed
18 condition?

19 MR. BRIERTY: Yes, I do.

20 MS. HOLMES: Thank you.

21 Dr. Greenberg, do you have anything to add to
22 that?

23 DR. GREENBERG: Yes. In response to your query
24 about whether it's appropriate for an applicant to
25 construct its own fire or emergency station on site,

1 essentially to have its own fire brigade, I certainly
2 agree with Chief Brierty that it is always preferable to
3 have on-site individuals who are well trained in aspects
4 of emergency response that they can be, however, it would
5 not obviate the need to have off-site response.

6 First of all, if there is a need for an entry
7 into a building that is on fire, that is where the
8 two-person-in two-person-out rule -- and it's more than
9 just a rule, it is actually a LORS from OSHA that requires
10 firefighters to have a certain complement of firefighters
11 available outside to equal the ones that go inside. It's
12 a standard practice.

13 Even when it comes to a rescue operation, a
14 confined space operation, for example, if you have two
15 individuals in, you must have at least one individual out
16 waiting to effect rescue.

17 I doubt that a private fire brigade would have
18 emergency medical personnel trained to the level of a
19 paramedic. There is a significant difference between a
20 paramedic and an emergency med technician. And I know
21 personally, and I think everyone would agree, that you
22 would want response from a paramedic and not just -- and
23 not an EMT when your life is threatened by injury.

24 We could go on, as Mr. Tyler spoke about
25 drawdown. In order to make sure that there is no

1 escalation of a fire at a solar power plant, you would
2 have not only on-site fire suppression response, but you
3 would have to have off-site fire suppression response.
4 And in the experiences that we have had, and granted that
5 it's not a very great experience, there have been only
6 three solar power plants in California, all in
7 San Bernardino County, all using Therminol; but if one
8 were to look just at the raw statistic, one could come to
9 the conclusion that it's a virtual certainty that a solar
10 power plant at some time in its history will have a major
11 fire that will result in literally depleting regional fire
12 response, and that then, of course, leaves the rest of the
13 community unprotected. And we certainly don't want to
14 have that.

15 So if the applicant chooses to have a fire
16 brigade, staff would not stand in their way, but it would
17 not relieve them at all of the necessity of having to
18 provide some mitigation to the San Bernardino County Fire
19 Department because San Bernardino County Fire Department
20 will have to respond to the emergency on site.

21 MS. HOLMES: Chief Brierty, are you familiar with
22 the fire that occurred at what's been referred to as the
23 Luz SEGS VIII facility that's in San Bernardino County?

24 MR. BRIERTY: Yes, I am.

25 MS. HOLMES: Can you give the committee some

1 sense of what level of response was required to respond to
2 that?

3 MR. BRIERTY: Well, it was -- in short, it
4 required the resources of almost every available fire
5 apparatus in the region. And it went for quite a long
6 time. I'm going to try to keep apples to apples and
7 oranges to oranges here; but I actually was at a hydrogen
8 fire many years ago in Fontana which required almost every
9 station in Fontana to respond. Although it wasn't a
10 hydrogen -- obviously it wasn't a solar plant since it was
11 so long ago. And it was generated -- the hydrogen was
12 generated from hydrochloric acid. But it did indeed
13 ignite, did not explode. It ignited and required the
14 response of several -- almost all fire stations in Fontana
15 to respond to it. I think it was seven at the time.

16 So this type of an incident would require what we
17 call -- would result in, rather, substantial drawdown, and
18 the term we use is "drawdown" for having multiple engine
19 companies respond to a fire of this nature.

20 MS. HOLMES: And is it your opinion that such an
21 incident is plausible for this facility?

22 MR. BRIERTY: Yes. And we still haven't seen all
23 of the technical data from the proponent, and which we
24 look forward to, and reviewing in technical detail the
25 mitigation measures; but, yes, absolutely.

1 MS. HOLMES: Thank you.

2 And, Dr. Greenberg, one last question.

3 Is it safe to say that staff recommends that the
4 condition adopt Worker Safety 7 as staff has proposed it?

5 DR. GREENBERG: Yes.

6 MS. HOLMES: Thank you.

7 I believe those are my questions. And the
8 witnesses are available for cross-examination.

9 HEARING OFFICER KRAMER: The applicant?

10 MS. FOLEY GANNON: Yes, just a couple questions.

11 CROSS-EXAMINATION

12 MS. FOLEY GANNON: And one, I'm not sure if it's
13 Dr. Greenberg, I'm not sure which staff who I'm addressing
14 this question to.

15 I wanted to make sure that we had clarity on what
16 level of detail we needed to provide to you so you could
17 complete the analysis that was described this afternoon as
18 being necessary. And I guess -- so I understand that
19 you're looking for the location of each individual
20 compressor. I guess what I'm trying to understand is this
21 request came as a result of the separation of the two
22 hydrogen systems? So is there something that we need to
23 show about the locations of those two hydrogen generating
24 systems and how they relate to the location of the
25 individual compressors that has raised this concern?

1 MR. TYLER: It's -- this is Rick Tyler.

2 It's, in general, necessary for us to know --
3 first off, let me state each one of those compressor
4 stations is a potential fire. And the potential fire can
5 then basically affect things around it. So most
6 importantly we need the location of those compressor
7 stations within the field and their relative location of
8 those to other pieces of equipment that are present in the
9 facility.

10 MS. FOLEY GANNON: Okay --

11 MR. TYLER: And I guess I would --

12 MS. FOLEY GANNON: Okay. We will provide that.
13 We're working to get it to you early next week.

14 MR. BRIERTY: And with regard to the HAZ OPS, the
15 hazards and operability study and the RMP, it would be
16 very appropriate to have some narrative in terms of --
17 well, for example, it's recently been brought up that we
18 may be -- that they may be using K cylinders instead of
19 piping. And if they are using K cylinders, I'm sure there
20 would be a procedure for connecting those and
21 disconnecting them and how the operations would be
22 handled. And that would be very important in a narrative
23 to be able to review that and work with a proponent on how
24 that would be -- how those cylinders would be handled,
25 transported, connected, disconnected, that type of thing.

1 MS. HOLMES: I believe that --

2 MR. BRIERTY: I'm sorry if I missed that, if that
3 was said earlier.

4 Go ahead.

5 MS. HOLMES: I believe that there will be some
6 additional discussion about the potential use of the
7 K bottles in light of the additional information that
8 staff has received about train traffic that's going to be
9 presented in the traffic and transportation section.

10 MS. FOLEY GANNON: And a couple of questions for
11 you, Chief Brierty.

12 We appreciate also the fact that you've been
13 meeting with the applicant to discuss these issues, and we
14 look forward to hopefully having further productive
15 conversations. We would ask that we are having a workshop
16 to discuss several of the conditions, and we would like to
17 be able to leave Worker Safety 7 open. Are you willing to
18 have discussions with us about --

19 MR. BRIERTY: Absolutely.

20 MS. FOLEY GANNON: All right. We would ask that
21 we have the opportunity to have further discussions with
22 the county fire department to see if we can come to a
23 resolution on a number --

24 MS. HOLMES: Staff certainly encourages the
25 applicant to work closely with the fire department, but I

1 fear that the workshop day is already more ambitious than
2 we're going to be able to handle with biology for two
3 projects scheduled.

4 MS. FOLEY GANNON: Ms. Holmes, I'm not suggesting
5 that the negotiations with the county fire department
6 would happen at a workshop. I was just suggesting that I
7 know we will be closing some aspects of the record today
8 at the conclusion of these hearings, and I'm just
9 suggesting that this is a condition that -- I believe
10 we'll probably be leaving the conditions open. But I was
11 also asking the chief if he can be willing to negotiate
12 with us about the amount of funding that will be
13 necessary.

14 MR. BRIERTY: Yes.

15 MS. FOLEY GANNON: Thank you.

16 And just for point of clarification, the fire at
17 the solar facility that was in San Bernardino County, that
18 was not a hydrogen fire, was it?

19 MR. BRIERTY: No. There have been no hydrogen
20 solar plants in San Bernardino County. It was a Therminol
21 fire. And for the record, that's important to point out.

22 MS. FOLEY GANNON: Thank you very much.

23 No further questions.

24 HEARING OFFICER KRAMER: Mr. Lamb, any questions?

25 MR. LAMB: No questions from BNSF.

1 HEARING OFFICER KRAMER: He says none.

2 CURE?

3 MS. MILES: No.

4 HEARING OFFICER KRAMER: She says no questions.

5 The Newberry CSD?

6 MR. WEIERBACH: I do have a few questions.

7 CROSS-EXAMINATION

8 MR. WEIERBACH: My first question directed
9 towards staff, I'm not sure if it would be for Mr. Tyler
10 or Dr. Greenberg to answer, at the beginning of Section
11 C.15 on page 1 pretty much begins with the statement that
12 staff has also determined that the project will have a
13 significant impact on the local fire protection services.

14 My question is what is the staff's definition of
15 "local fire protection services"?

16 DR. GREENBERG: This is Alvin Greenberg. I'll
17 respond to that one.

18 When we say "local," we do mean the authority
19 having jurisdiction.

20 MR. WEIERBACH: So let me clarify that.

21 You mean only the agency having jurisdiction; you
22 are not taking into consideration any agency that would be
23 impacted either geographically or contractually outside of
24 the jurisdiction?

25 DR. GREENBERG: Well, I wouldn't know how it

1 would be impacted geographically or contractually.

2 "Local" means a local fire department, and it would be the
3 authority having jurisdiction.

4 MR. WEIERBACH: Okay. Thank you.

5 MR. TYLER: This is Rick Tyler.

6 I think it would also be any authority that was
7 reasonably close that had a mutual-aid agreement, because
8 those could also suffer drawdown as a result.

9 DR. GREENBERG: And everybody -- this is Alvin
10 Greenberg speaking.

11 Virtually every fire department by state law has
12 mutual-aid agreements. I think what Mr. Tyler might be
13 referring to is an automatic-aid agreement.

14 MR. WEIERBACH: Mr. Tyler, is that what you were
15 referring to?

16 MR. TYLER: Yes, that's what I was referring to.

17 MR. WEIERBACH: In Section C.15-4, paragraph two
18 states that there are a total of 20 fire stations within
19 the San Bernardino County Fire District North Desert
20 Division, the closest of which would be the Harvard and
21 Amboy Station.

22 My question to staff is --

23 MS. HOLMES: I'm sorry, I'm not following. C.15?

24 MR. WEIERBACH: 4.

25 MS. HOLMES: Thank you.

1 MR. WEIERBACH: That there are a total of 20 fire
2 stations within the San Bernardino County Fire District
3 North Division, the closest of which would be the Harvard
4 and Amboy stations.

5 My question to staff is are you under the
6 assumption the Amboy station is in service?

7 DR. GREENBERG: Hang on. Let me look.

8 This is Alvin Greenberg.

9 No, I am not under the --

10 MR. BRIERTY: I'll just clarify that. There's no
11 Amboy station.

12 DR. GREENBERG: Yeah, I was about to say, I am
13 not under any illusion that the Amboy station is anything
14 more than in the planning stage.

15 MR. WEIERBACH: So for point of clarification, at
16 this point in time the only San Bernardino County Fire
17 District station that is in service within a close
18 geographic proximity to the site that can respond is the
19 Harvard station.

20 DR. GREENBERG: This is Alvin Greenberg.

21 Correct.

22 MR. WEIERBACH: Do you know the staffing levels
23 currently at the Harvard station? Was that information
24 provided to you?

25 DR. GREENBERG: This is Alvin Greenberg.

1 No, I don't recall. I think that was provided to
2 us, but I don't recall it off the top of my head right
3 now.

4 MS. HOLMES: Is that a question that
5 Chief Brierty could answer?

6 MR. BRIERTY: I believe -- I haven't memorized
7 the staffing level of all 60 stations, but I believe it's
8 paid call at this time.

9 MR. WEIERBACH: Do you know approximately how
10 many staff are available on an average at any given time?

11 MR. BRIERTY: Paid call is -- it's a very good
12 question, and actually, quite illustrative of the issue
13 that we have, that unlike a metropolitan station that has
14 staff standing by, and typically, say, in Fontana, you
15 could have seven stations respond with three to four
16 persons per station within less than seven minutes. The
17 paid call issue that we in San Bernardino County have to
18 deal with, as do our brothers and sisters in Newberry
19 Springs, is that it's very unpredictable to be able to get
20 a number on response because the paid call folks have jobs
21 that are not fire related, and require them to get to the
22 station, staff the engine and respond.

23 And that's the primary reason we're asking for
24 the support financially, to provide full-time staffing and
25 support staffing in other areas to respond to these types

1 of emergencies because of the difficulty of getting paid
2 call staff to respond.

3 And the pool, say, when we went to Abengoa, we
4 had about 12 people that are paid call firefighters in
5 Hinkley, most of the time approximately six are available
6 and -- I'm sorry, on average about six are available, but
7 we generally can get down to about two people only
8 responding out of the Hinkley station.

9 And these are the same types of issues that we
10 find all across the north desert in terms of our paid call
11 stations, is the reliability of being able to have paid
12 call staff respond to incidents as opposed to what you
13 would find in more metropolitan areas, areas that do have
14 these types of industrial commercial issues that they face
15 every day. And as we bring these types of facilities or
16 these facilities develop in the desert, it's more and more
17 appropriate to staff up to equip these types of stations
18 with full-time professional firefighters and medics.

19 And the answer to the question was no, I don't
20 know the exact number at Harvard. But thank you for the
21 opportunity.

22 MR. WEIERBACH: Thank you for getting there.

23 Would it be a reasonably correct assertion to say
24 with the current staffing levels and at the Harvard 46
25 Station now that there is a reasonably frequent occurrence

1 to use an agency outside of your jurisdiction to assist
2 with a call to respond? You rely on mutual aid, would be
3 the simple term.

4 MR. BRIERTY: Oh, yeah, we rely on mutual aid;
5 and that's exactly the reason that we're hoping to go
6 through this process to provide mitigation to provide
7 full-time staffing, exactly, yes. We do indeed rely on
8 all agencies across the desert. And I think because of
9 the lack of funding for fire service and firefighters in
10 the desert is why we do rely so heavily on our partner
11 fire departments across the north desert.

12 MR. WEIERBACH: Chief Brierty, so at this point,
13 using an assumption that the project, the Calico project
14 is not approved, would you continue with that current
15 relationship using mutual aid to respond to calls?

16 MR. BRIERTY: I would absolutely, sure. As any
17 call that we have, as you know, we try to use the
18 resources that are available and work together as much as
19 possible. Absolutely.

20 MR. WEIERBACH: Okay.

21 My question -- I have another question directed
22 towards staff.

23 When reviewing any financial impact that may be
24 realized by the local jurisdiction, was financial impact
25 to the mutual aid agencies also taken into consideration,

1 and also was any benefit received from a local
2 jurisdiction taken -- from mutual aid agencies taken into
3 consideration?

4 DR. GREENBERG: This is Alvin Greenberg.

5 And the answer to both those questions is no,
6 staff, did not look at that.

7 MR. WEIERBACH: Thank you.

8 I have no other questions at this time.

9 HEARING OFFICER KRAMER: Did I ask CURE already?

10 Okay.

11 Finally then, the county.

12 MR. BRIZZEE: No questions.

13 HEARING OFFICER KRAMER: Who has no questions.

14 Okay.

15 MR. BRIERTY: Point of clarification on counsel's
16 last question.

17 Although we wish -- certainly want to entertain
18 and discuss and move forward with the discussions on
19 number 7, for the record, we certainly stand by the
20 Hoffman Report and the staff numbers that are there.

21 MS. FOLEY GANNON: But we did hear you say you
22 are willing to have discussions --

23 MR. BRIERTY: Oh, absolutely.

24 MS. FOLEY GANNON: Thank you.

25 MR. BRIERTY: Uh-huh, absolutely.

1 HEARING OFFICER KRAMER: Okay.

2 Finally, we have a witness from the Community
3 Services District.

4 MR. WEIERBACH: I would like to call Chief Robert
5 Springer as a witness. And Chief Springer has not been
6 previously sworn in.

7 HEARING OFFICER KRAMER: If you could raise your
8 right hand.

9 (Robert Springer was sworn.)

10 HEARING OFFICER KRAMER: Thank you.

11 He's sworn.

12 Remember to get really close to the microphone.

13 DIRECT EXAMINATION

14 MR. WEIERBACH: Chief Springer, are you an
15 appointed and sworn official by the Newberry Community
16 Services District?

17 MR. SPRINGER: Yes, I am.

18 MR. WEIERBACH: And did you author the rebuttal
19 testimony by the Newberry Community Services District
20 offered as Exhibit 1100?

21 MR. SPRINGER: Yes, I did.

22 MR. WEIERBACH: Could you briefly for the record
23 give us an outline of your qualifications.

24 MR. SPRINGER: Qualifications is 20-year veteran
25 of the fire service, Newberry Springs from 1990 to

1 present; career firefighter, 14 years at a full-time
2 career agency in this area. Numerous number of fire
3 classes and fire certifications, including fire officer,
4 prevention officer, some admin classes, some specific
5 classes in fire technology, fire rescue, auto extrication,
6 hazardous material specialist, communications and
7 emergency disaster planning and so on and so forth.

8 MR. WEIERBACH: Chief Springer, do you have any
9 changes or corrections to the testimony you submitted?

10 MR. SPRINGER: Some minor clarifications I
11 noticed after re-reading. There's some distance --
12 questions of -- Phase I of the project, we are four miles
13 from the distant boundary, two miles on Phase II from the
14 closest boundary east to west of the project. That's
15 about it.

16 Battery cuts out on this microphone, so I try to
17 stay close.

18 MR. WEIERBACH: Thank you.

19 Chief Springer, what agency do you believe has
20 the jurisdiction for emergency services at the Calico
21 site?

22 MR. SPRINGER: As I stated in my exhibit, there
23 has never been a question nor is there any dispute that
24 this is clearly a San Bernardino County jurisdictional
25 operational area; this is not anyone else's authority,

1 they are the AJ.

2 MS. HOLMES: I'm sorry, we're having trouble
3 hearing the witness.

4 MR. SPRINGER: Can you hear still?

5 MS. HOLMES: That's a little bit better.

6 MR. WEIERBACH: For the record, for those that
7 are calling in, could you repeat the question as to who
8 you believe has jurisdiction for the Calico project site
9 in regards to emergency services?

10 MR. SPRINGER: The Calico site project is under
11 the authority and jurisdiction of San Bernardino County.

12 MR. WEIERBACH: Does the Newberry Springs Fire
13 Department currently offer any mutual aid services to the
14 County of San Bernardino?

15 MR. SPRINGER: We have mutual-aid agreements with
16 San Bernardino County as well as the Daggett, Yermo,
17 Barstow, United States Marine Corps, Fort Irwin, CAL Fire,
18 BLM. And that is about it for the area.

19 MR. WEIERBACH: Because the Newberry Springs Fire
20 Department is not within the jurisdiction of the project
21 site, could you briefly explain why you feel the Newberry
22 Springs Fire Department may be impacted by the project?

23 MR. SPRINGER: The biggest concern for filing
24 this intervening is that there seems to be no
25 consideration for the outlying areas that are working in

1 cooperation with San Bernardino County to meet their
2 response and mitigation factors. We do not know -- and
3 the county can plan as well as any other district can plan
4 on the response requirements for a given circumstance. No
5 agency has all those resources in one area to allocate.

6 So if there is an event, a major event at the
7 Calico Solar site, we do anticipate specific or certain or
8 multiple apparatus requests come through my agency from my
9 agency to support their response and needs as well as they
10 respond to apparatus and needs to my agency also. That
11 would put a significant drain on resource in our area for
12 coverage, but that is not addressed.

13 MR. WEIERBACH: For point of clarification, does
14 Newberry Springs Fire Department ever rely on mutual aid
15 for its calls within its jurisdiction area?

16 MR. SPRINGER: Yes, we do. Quite frequently
17 mutual aid is transported back and forth between
18 San Bernardino County and ourself, giving a give and take
19 through a reciprocal agreement.

20 MR. WEIERBACH: If the Newberry Springs Fire
21 Department responds to a mutual-aid request in an area
22 outside of its jurisdiction, does the fire department or
23 the Community Services District, to the best of your
24 knowledge, receive any compensation for responding to that
25 call?

1 MR. SPRINGER: That's usually call depictive. We
2 try not to -- we cannot assess billings for certain type
3 of calls because we stand by fire protection is fire
4 protection services given. However, there are some cost
5 recovery measures that can be applied depending on the
6 incident, the location, parties involved, and actually who
7 is jurisdictional. We may bill under or be billed under a
8 jurisdiction blanket or an individual blanket depending on
9 the incident location.

10 MR. WEIERBACH: Thank you.

11 I have no other questions, and I'll offer the
12 witness for cross-examination.

13 HEARING OFFICER KRAMER: The applicant?

14 MS. FOLEY GANNON: No questions.

15 HEARING OFFICER KRAMER: Burlington Northern?

16 MR. LAMB: No questions.

17 HEARING OFFICER KRAMER: CURE?

18 MS. MILES: No questions.

19 HEARING OFFICER KRAMER: She says no questions.

20 San Bernardino County?

21 MR. BRIZZEE: No questions. Thank you.

22 MS. HOLMES: And staff has no questions.

23 HEARING OFFICER KRAMER: You beat me.

24 Okay. Then that completes our witnesses. If
25 everyone can stick around though, the committee has a

1 couple questions about various aspects of what you've
2 spoken about. And it may be that a response from any of
3 you is -- would be appropriate.

4 Commissioner Eggert.

5 MR. LAMB: Hearing Officer Kramer, before you do
6 that, I think we need to put Mr. Phillips on for
7 cross-examination if anyone wants to cross-examine him.
8 He submitted the testimony under 1201, it applied
9 yesterday, it also applies to hazardous materials and
10 hydrogen.

11 HEARING OFFICER KRAMER: Okay. That's -- I'm
12 sorry, I didn't have him on my list, but you're correct.

13 Does anybody wish to cross-examine Mr. Phillips?

14 MS. FOLEY GANNON: No.

15 HEARING OFFICER KRAMER: Seeing none -- okay.
16 Staff?

17 MS. HOLMES: No.

18 HEARING OFFICER KRAMER: Okay.

19 MR. LAMB: Thank you. I just wanted to follow
20 through on that.

21 HEARING OFFICER KRAMER: Okay.

22 Commissioner Eggert?

23 COMMISSIONER EGGERT: Okay. This should be
24 relatively brief, I hope.

25 Just as, I guess, the first -- a couple of

1 comments.

2 One is that providing, you know, proper fire
3 service to these projects I think is extremely important,
4 and particularly, you know, recognizing the fact that
5 local jurisdictions, particularly in the central valley,
6 including the county, are strapped for resources and, you
7 know, I think are doing well to look forward into the
8 future to see sort of what types of demand on their
9 services might be coming down the road.

10 Also, I think at the same time, so this analysis
11 that's been referenced here is also present in a number of
12 other cases that is before the commission, and so this is
13 important not just to this project but also to other CEC
14 projects as well as projects that are outside of our
15 jurisdiction because it references large-scale
16 photovoltaic development as well in terms of cost
17 allocation.

18 I think I'll express the sentiment which I think
19 is also expressed in a recent decision that was put out
20 today for another project, and that is that I think the
21 analysis that's been put forth thus far does need further
22 investigation. I think it's rather kind of a new
23 methodology, as we discovered in our previous case, and
24 the level of compensation is quite substantial and I think
25 has the potential to significantly effect the economics of

1 these projects. So that's why it's important to us. And
2 at the same time, again, just to restate, we do want to
3 make sure that the actual impact to the local
4 jurisdictions is properly accounted for.

5 So I guess my question is, for those of you who
6 are familiar with the other decision, my worry is that we
7 may not be able to get to a resolution. This is just a
8 speculation. And whether or not there might be some
9 thought given to a third-party analysis, similar to what
10 we're contemplating for the Abengoa case, if there isn't a
11 negotiated settlement between the parties.

12 And so I'll just put that question out on the
13 table and ask if either staff, applicant, or any of the
14 parties have any thoughts about that.

15 MS. BELLOWS: That would be agreeable to the
16 applicant as long as we would -- the first avenue that we
17 would go down is negotiation with the county, and then
18 after that, in the event that the parties are unable to
19 come to a mutually-agreeable solution, that we go to a
20 third party.

21 COMMISSIONER EGGERT: Any comments from staff?

22 MR. TYLER: This is Rick Tyler.

23 I think the Abengoa decision used directly the
24 condition from the Colusa project in the past. That
25 condition, staff had legal concerns with as well as the

1 approximate number -- or the number that was put in as the
2 default.

3 In the Imperial Valley project, the applicant
4 stipulated to a newer version of that condition that
5 actually uses the numbers that are derived as the default,
6 and that also bounded the maximum that would result even
7 from the independent study. It didn't prescribe a lower
8 boundary, but it did basically set the higher boundary on
9 the mitigation amount.

10 So there are two different approaches. And we
11 support the Imperial Valley type approach.

12 COMMISSIONER EGGERT: Just to correct you, I
13 think the condition, as I understand in Abengoa, is not
14 specifically a copy of the Colusa condition. You can
15 check with our hearing office about that.

16 So in terms of your answer with respect to the
17 Imperial project, you're saying that if it has both a
18 lower and an upper bound, that satisfies some of your
19 concerns?

20 MR. TYLER: I think our concern was that the
21 default amount would be -- would be the amount that we
22 believe is closest, which is what we've proposed as a
23 mitigation. And the point I guess I'm making is when a
24 fire needs assessment is done, there is no guarantee that
25 it, in fact, won't produce a larger number. And so we

1 felt that from the standpoint of some sort of mitigation
2 certainty, that we provided that sort of an approach. And
3 we also modified it slightly to make sure that the CEC
4 staff actually chose the -- chooses the independent
5 contractor and that it's paid for by the applicant.

6 MS. HOLMES: But we do have a fundamental concern
7 with saying we'll figure it out later. We think that
8 that's clearly not allowed under CEQA case law.

9 COMMISSIONER EGGERT: Okay. I think that --
10 well, actually, if the county has any thoughts or any
11 contribution to the discussion?

12 MR. BRIZZEE: Yeah. I would let the commission
13 know that we have been anxious to negotiate in all of
14 these cases, and I would reiterate --

15 MS. HOLMES: I'm sorry, we can't hear.

16 MR. BRIZZEE: Yeah. I would let the commission
17 know that we've been anxious to negotiate in all of these
18 cases, and have, in fact, ongoing discussions with the
19 three primary cases that are before the commission.

20 And I will concur with what Chief Brierty said to
21 the applicant about our willingness to continue those
22 discussions. And I think that's entirely consistent with
23 county supervision.

24 That being said though, I don't want what Chief
25 Brierty said to go by the board, and that is there's a

1 number on the table that's substantiated by evidence, and
2 so far as this record is concerned, we believe that that
3 number is defensible and the analysis is defensible.

4 But again, we're anxious to further these
5 discussions, and if we can come to a mutual resolution,
6 we're more than happy to do that.

7 MR. BRIERTY: For those of you who aren't in the
8 room, I'm nodding my head in agreement.

9 This is Peter Brierty, assistant chief.

10 We've been trying rather unsuccessfully to get
11 one of the proponents back into the discussion room on the
12 same topic. And I think the day that we met with the
13 proponent Calico, we are already planning to set up a
14 technical review meeting as soon as possible, and are
15 looking forward to meeting with them regarding condition
16 number 7.

17 COMMISSIONER EGGERT: And the committee would
18 very much encourage those activities. So happy to see
19 that there appears to be a mutual commitment on all sides.
20 The hope is -- I can speak for myself, not
21 Commissioner Byron -- but certainly if there is the
22 opportunity to have that resolved by the time of the 18th,
23 that's perhaps ambitious, but it sounds like there's going
24 to be some discussions ongoing to try to reach some sort
25 of a resolution.

1 Okay. I think I have what I need on this issue.

2 Actually, I was going to mention to

3 Dr. Greenberg, I always appreciate your knowledge and
4 expertise, but on your topic of the flammability range of
5 hydrogen, I would encourage you to look at some of the
6 studies done by Dr. Swain of the University of Miami
7 showing that that's not actually a very good indicator of
8 the flammability risk for those energy carriers that you
9 mentioned.

10 DR. GREENBERG: Thank you.

11 HEARING OFFICER KRAMER: Okay. I had a couple
12 questions, very detailed questions about a couple of the
13 conditions.

14 Let's go back to HAZ 2, and the proposed change.

15 Am I correct that there are -- hydrogen is not
16 the only hazardous material we're talking about on this
17 site, right? There's more than hydrogen?

18 MR. TYLER: Correct.

19 HEARING OFFICER KRAMER: And that's why we're
20 splitting out the two different reporting requirements.

21 So then in the first paragraph where we speak
22 about the non-hydrogen ingredients, if you will, we will
23 adjust a phrase. It says, "hazardous materials other than
24 hydrogen," just to make it -- I think to achieve the goal
25 that you're trying to reach there.

1 And then in -- let me find it, I think it was
2 Worker Safety 6 -- hold on.

3 MS. HOLMES: Hearing Officer Kramer, do you mean
4 worker safety -- excuse me, were you talking about worker
5 safety or hazardous materials?

6 HEARING OFFICER KRAMER: It might have been
7 haz mat.

8 Oh, no, it was back in Worker Safety 2 -- I'm
9 sorry, Hazardous 2.

10 Another point. The trigger talks about receiving
11 hydrogen on the site; but, in fact, it's not going to be
12 generated off site and received there, it's going to be
13 generated on site. So should we instead be saying prior
14 to generating any hydrogen, or perhaps generating or
15 receiving?

16 MS. FOLEY GANNON: I would say generating or
17 receiving would probably make sense.

18 MS. HOLMES: That's fine.

19 DR. GREENBERG: This is Alvin Greenberg.

20 Yes, Hearing Officer Kramer, you're right, we
21 should add the word generating or receiving.

22 HEARING OFFICER KRAMER: Okay. So it's fair to
23 say then that we will be at least getting a report on the
24 results of the discussions that will be going on at the
25 August 18th hearing. So I mean, I've been pretty casual

1 about indicating which records are closed and which are
2 not in here, but this will obviously be one that is not.

3 Anything else from the parties on worker safety
4 or hazardous materials?

5 Hearing nothing then, we will dismiss our
6 witnesses and finish our topics today with transmission
7 line safety and nuisance.

8 And the only bit of business there was for
9 Mr. Lamb to cross-examine -- well, did you want to put
10 your witness, Mr. Skills, on?

11 MR. LAMB: Sure, we can do that.

12 HEARING OFFICER KRAMER: And would that be just
13 for cross-examination?

14 MR. LAMB: It's just for cross-examination. I am
15 not aware of whether the applicant and the staff had put
16 blanks, I didn't know if they were going to put a witness
17 on for the sake of brevity, and obviously, again, subject
18 to, I understand, staff's concern about conditions of
19 certification, I believe that BNSF and the applicant had
20 come to a general agreement regarding a proposed condition
21 of certification in relation to transmission lines, that
22 they be 300 feet from the right of way. And in addition,
23 we had asked that if they cross the right of way, that it
24 be done in a perpendicular manner.

25 HEARING OFFICER KRAMER: And is that going to be

1 memorialized in some way?

2 MR. LAMB: As are many, Hearing Officer Kramer,
3 yes. And we're going to do that over the following week
4 and get that to you in a manner -- I'm getting --

5 MS. FOLEY GANNON: Staff's condition that they
6 proposed this morning includes the 300 foot setback --

7 MS. HOLMES: From the edge of the right of way,
8 right; we distributed that this morning. It's a
9 modification shown in underline strike out, but there's
10 only underline because we only had addition to
11 Transmission Line Safety and Nuisance 4. That was served
12 this morning.

13 MR. LAMB: And I've seen that, and we greatly
14 appreciate that. And our only addition to that, that was
15 part of Mr. Skills' testimony, which is Exhibit 1200, is
16 that the transmission lines to the extent that they cross
17 the right of way do so in a perpendicular or 90-degree
18 manner.

19 MS. FOLEY GANNON: And the applicant is fine with
20 that.

21 MS. HOLMES: Yes, staff has no objection to
22 making that addition to TLSN 4.

23 MR. LAMB: Well, if that's the case, and we
24 appreciate that representation, we understand that --
25 aside from what the staff has already written up, we'll

1 work with the applicant and get something in a form to
2 present to the commission. We would offer Mr. Skills to
3 testify. If there aren't any questions, obviously we can
4 do -- subject to the commission, we can do with him what
5 we obviously did with Mr. Schmidt.

6 MS. HOLMES: We have no questions.

7 MS. FOLEY GANNON: No questions.

8 HEARING OFFICER KRAMER: Does anybody have
9 questions for him?

10 Seeing none, then we will -- we do not need to
11 have him testify.

12 Did you have any cross-examination for anyone
13 else?

14 MR. LAMB: There is no one else, Mr. Kramer, so
15 the answer's no.

16 HEARING OFFICER KRAMER: Okay. Then that will
17 close out transmission line safety and nuisance.

18 Hold on a second.

19 Let's then look at the staff proposed conditions
20 that were provided either late yesterday or earlier today.
21 One is air quality AQSE 9. And we have a printed copy
22 here in the room. That relates to the standards that
23 apply to some of the generators.

24 Does anybody require staff to explain this, or is
25 it acceptable to everyone?

1 MS. FOLEY GANNON: It's acceptable to the
2 applicant.

3 MS. MILES: Did you say -- what was the
4 condition?

5 HEARING OFFICER KRAMER: AQSE 9. It's a single
6 page.

7 MS. HOLMES: It was distributed later than the
8 group of, I believe it was four that went out first thing
9 in the morning. We needed to confirm the exact phrasing
10 with Mr. Walters, and so it went out maybe at 10:30 or so.

11 HEARING OFFICER KRAMER: Does anybody have an
12 issue with it?

13 Okay. We'll note the lack of issues.

14 Then we have -- we have proposed changes to Noise
15 1, 6, et cetera, that are contained in a single document.

16 Any issues with the proposed changes to Noise 1?

17 MS. FOLEY GANNON: The applicant concurs with
18 this proposed change.

19 HEARING OFFICER KRAMER: Any concerns on any
20 part?

21 Okay. We'll note your lack of comment.

22 Noise 6 is the condition relating to hours of
23 construction operation that we've discussed quite a bit
24 over the last few days. It contains now a footnote
25 defining what noisy construction is and requires the

1 consent of the two home owners in the vicinity.

2 MS. HOLMES: It provides three options for
3 construction outside the Monday through Saturday times.

4 HEARING OFFICER KRAMER: Okay. The other two are
5 a CPM determination that the noise will not exceed the
6 daytime ambient levels at those two residences by more
7 than ten, more than ten dBa.

8 MS. HOLMES: Ten for the daytime, five at
9 nighttime.

10 And then the third option is that it will not
11 continue for very long; in other words, it will be a very
12 temporary impact, in which case we find that it's not
13 significant.

14 HEARING OFFICER KRAMER: Does anybody have any
15 concerns about that, those changes?

16 MS. FOLEY GANNON: The applicant concurs with the
17 proposed changes.

18 HEARING OFFICER KRAMER: Okay. The next one is
19 to REL, R-E-L 1. It's a new condition.

20 MS. HOLMES: Reliability.

21 HEARING OFFICER KRAMER: Thank you. I've never
22 seen a reliability condition, so I was racking my brain to
23 figure out what -- which section it went to.

24 MS. HOLMES: It's an engineering-related -- it
25 relates to collecting some information about performance

1 and reliability. We discussed this; I believe it was
2 Wednesday.

3 HEARING OFFICER KRAMER: Any adverse comments on
4 this proposal?

5 MS. MILES: I have a question.

6 I don't see an opportunity for recourse if the
7 concerns rise to a high level about the reliability of the
8 project.

9 MS. HOLMES: Well, I don't think the commission's
10 going to grant a conditional certification saying that
11 something needs to happen if there are a lot of
12 reliability problems at Maricopa. What we're hoping is
13 that as we get more data both from Maricopa and this
14 facility, that we'll be able to work with the applicant
15 and with the applicant in Imperial to address and improve
16 reliability.

17 We all understand that this is a new technology
18 at this level of deployment. And so staff is not
19 recommending that there be a condition that requires a
20 revisiting of the commission's decision to permit the
21 project should there be reliability problems.

22 The purpose of this condition is to ensure that
23 we have the ability to work together with the applicant to
24 try to address any concerns that do become apparent;
25 although based on the information we have from Maricopa so

1 far, things are looking -- things are looking somewhat
2 promising.

3 MS. MILES: So are you saying that without this
4 condition, you would not be able to work with the
5 applicant?

6 MS. HOLMES: What this does, I think, is it
7 provides everybody, including other parties or members of
8 the public who are interested in following this, this
9 provides a list of the specific information that the staff
10 believes is important to assess reliability. And as we
11 indicated on Wednesday, we'd be happy to aggregate
12 confidential information and make it available publicly.
13 I think the commission and the public both have an
14 interest in seeing how well this technology performs over
15 time.

16 MS. MILES: I guess I was just wondering if there
17 was an opportunity for recourse, perhaps short of not
18 permitting the project or trying to withdraw permitting
19 approval, but some other additional intervention besides
20 just information.

21 MS. HOLMES: Well, certainly staff has the
22 ability to go back to the commission if they -- if they
23 think there's some problem. But the only other situation
24 I can think of, Ms. Miles, would be where we said that
25 they couldn't build all of it or something, and that's not

1 what staff is proposing.

2 MS. MILES: Okay. Thank you for the
3 clarification.

4 MS. FOLEY GANNON: The applicant has no objection
5 to this condition.

6 HEARING OFFICER KRAMER: Okay. Thank you.

7 We have already discussed TLSN 4. Any further
8 comments on that?

9 MS. HOLMES: No. We're looking forward to seeing
10 the additional language that the applicant and BNSF have
11 agreed to; and I don't anticipate a problem. We would
12 presumably incorporate it into staff's proposed conditions
13 of certification.

14 HEARING OFFICER KRAMER: Okay. TSE 5 contains
15 the requirement that we discussed the other day that there
16 be sufficient reactive power resources as required by the
17 LGIA and removes the requirement for a detailed facility
18 study and the LGIA because they have already been
19 received.

20 Any comments there?

21 MS. MILES: Yeah. As we mentioned with David
22 Marcus's testimony, we're concerned that there is no
23 Phase II LGIA in place. And I know typically once you
24 receive a signed LGIA, that's sufficient; but in this
25 case, because we have the unique circumstance that FERC

1 expressly rejected the Phase II portion of the LGIA, we
2 recommend that LGIA that has been approved to be a
3 condition.

4 HEARING OFFICER KRAMER: Question for the
5 applicant. That's a public document, correct?

6 MS. FOLEY GANNON: Right. And as we discussed
7 the other day, we think it's important to note here that
8 that was denied without prejudice. They were asked to
9 produce an additional piece of information, which has now
10 been submitted. So we believe that there's really nothing
11 different here from generally having a signed LGIA, as
12 most projects are required, this project has submitted
13 that. We believe we satisfied the condition.

14 The remainder of the condition we have no
15 objection to.

16 HEARING OFFICER KRAMER: Okay. What's the
17 practical objection to just being required to submit the
18 new one? Is it a timing issue, or are you concerned that
19 that will hold up the start of construction?

20 MS. FOLEY GANNON: I guess we're just confused,
21 what would be the timing of it, what are you looking for?
22 We don't have a new LGIA. Our LGIA exists, it's signed,
23 it has not been changed. There will be an approval, which
24 is a separate regulatory action, and which is taken by
25 another agency that will be a public document, absolutely.

1 We don't see why that needs to be in the condition of
2 certification; and yes, we are concerned about how that
3 would have timing implications.

4 HEARING OFFICER KRAMER: Okay. Well, I
5 understand then.

6 So, Ms. Miles, in effect, you would not have been
7 satisfied with the original condition because that did not
8 require FERC approval, right?

9 MS. MILES: I'm not sure the issue would have
10 arose for us if we had not found out that FERC had
11 rejected the Phase II of the LGIA and that there had been
12 protests filed by a number of parties at FERC regarding
13 non-standard provisions in the contract that they felt
14 were unfair to numerous parties.

15 And we actually filed the information about that
16 as an exhibit to David Marcus's testimony.

17 HEARING OFFICER KRAMER: Okay. And were those
18 concerns of others that were expressed to FERC, did they
19 relate to any environmental issues, or are we simply
20 talking about a dispute among competitors that's being
21 played out in a forum?

22 MS. MILES: It was not a dispute among
23 competitors, it was regarding cost to parties, including
24 cities, different cities and parties that were going to
25 have to, I believe, cover cost associated with building of

1 transmission if there's a plant abandonment.

2 MS. FOLEY GANNON: It was really related to cost
3 issues associated with several communities who did file a
4 protest. Again, there was additional information that was
5 needed to file, they have subsequently filed that
6 information. I mean, yes, in reality we think, you know,
7 we were ahead of the game, we had the LGIA signed, we got
8 it in, and now we're asking for something different than
9 is usually required.

10 HEARING OFFICER KRAMER: Okay. We'll take all
11 this under consideration then.

12 And I believe that -- let me check my notes, but
13 I think that pretty much exhausts the business we can
14 conduct today.

15 MR. BASOFIN: Mr. Kramer, I just have a process
16 question.

17 I have issues with the reliability condition of
18 certification, but I'm not particularly prepared to lay
19 out my case today since I've only just received this
20 document. Will this be receiving an exhibit number and
21 will we have a chance to brief it later?

22 HEARING OFFICER KRAMER: Yes, that's probably a
23 good idea. Let's -- let's label the proposed changes to
24 AQSE 9 as staff's Exhibit 305, I believe.

25 MS. HOLMES: No, I believe we're on -- well, let

1 me go through them.

2 Would this be a good time to do that?

3 We had identified up to 302 in our pre-hearing
4 conference statement, 303 as our rebuttal testimony, 304
5 as the discussion of the transmission system upgrades, 305
6 as Appendix A to the biological resources section, and 306
7 as the new figures 5A and 5B to the biological resources
8 section. So by my count, we're up to Exhibit 307.

9 COMMISSIONER EGGERT: Hearing Officer Kramer,
10 maybe before we continue along the numbering scheme, I did
11 want to make sure we gave Mr. Coffey an opportunity to
12 provide a comment. He's been waiting quite patiently,
13 pretty much all day.

14 And if you want to come up to the microphone.

15 And if there is anybody else who is in the
16 audience who does want to provide a closing comment for
17 us, I believe there's still some blue cards in the back.
18 So please fill those out so we know your name and
19 affiliation.

20 So, Mr. Coffey, welcome. Is it Coffey?

21 MR. COFFEY: Yes, it is. C-o-f-f-e-y.

22 COMMISSIONER EGGERT: Welcome.

23 MR. COFFEY: I'd like to thank the commission for
24 having this meeting so close to the site.

25 HEARING OFFICER KRAMER: Get closer to your mic,

1 please.

2 MR. COFFEY: I would like to thank the commission
3 for having this hearing so close to the site involved. It
4 makes it easier for neighbors and adjacent property owners
5 and other stakeholders here in the desert to get to the
6 meeting or arrange for representation.

7 I left my furry clients and my hard shell clients
8 outside.

9 I'd also like to thank you for allowing me to
10 testify today before the commission without any prior
11 arrangements.

12 My name is John Coffey. I've lived in the high
13 desert since 1995. I graduated from law school in 1986;
14 but everybody relax, I'm still an honest man, I'm not a
15 lawyer.

16 I do have a lot of experience in CEQA. I worked
17 heavily with HelpHinkley.org which is currently awaiting a
18 check from the County of San Bernardino for \$265,000 in
19 court costs and attorney fees on the Nursery Products LLC
20 matter, which is not yet concluded.

21 I've also worked for the census bureau in 2000
22 and 2010. And my area of responsibility included most of
23 the northern part of San Bernardino County from roughly
24 Adelanto all the way across the area north of
25 Interstate 40 to the state line.

1 And as far as Dr. Poff's testimony is concerned,
2 concerning the climate change, although I can't talk about
3 the humans I found in the area because of census
4 confidentiality, there has been a marked decrease in the
5 size and the vigor of vegetation that is native to the
6 high desert and also the associated wildlife. There's
7 been a dramatic decrease in the number of rodents,
8 endangered and non-endangered, and those that find them
9 tasty at times, such as Rosie the sidewinder, Mojave Bob,
10 and a few others that we have up here.

11 So from an anecdotal standpoint, I can testify
12 that the climate change data that Dr. Poff provided has
13 some real life aspects to it. I have seen this
14 qualitative and quantitative change in the high desert.
15 How much is attributable to human activity up here is up
16 for debate. But the endangered species are under stress.
17 And I am really concerned about some of these non-sensical
18 so-called mitigations that we have seen exercised.

19 I'd like to address specifically the attempted
20 relocation of the Solarian Valley Mojave Desert Tortoise
21 to other areas.

22 Now, the unique aspects of Fort Irwin aside, and
23 there are some that are outside of what you need to hear
24 about, they've had a 90 percent fatality rate in this
25 attempted move. Relocation is not an option, even

1 according to the BLM. It simply is not an option.
2 However, if you're a developer and you're working on your
3 endangered species eradication plan, it works just fine,
4 thank you.

5 And the other endangered species around here, the
6 kangaroo rat, the kit fox, and a number of others,
7 including the recently listed Mojave Green Rattlesnake,
8 they suffer from the same kinds of habitat disturbance and
9 contraction. And there is this phenomenon known as edge.
10 All you fellow tree-huggers know about edge.

11 When the vast tracks of land start getting
12 smaller and smaller, then the species, you know, retreat
13 from the busy human impact it edges of the habitat. So
14 you might say you've got 15,000 acres of habitat, but the
15 species are only using maybe 8- to 10,000 of it because of
16 this edge phenomenon.

17 The economic viability of these programs is
18 rapidly coming into question as the nuts and bolts and the
19 devil in the details comes out.

20 I worked at HAZMART at Fort Irwin for the year --
21 most of the year of 2002. And I can tell you that this is
22 a situation, you know, using compressed hydrogen gas --
23 goodness gracious. Am I the only one here that remembers
24 the Hindenberg? Goodness gracious.

25 I'm glad to see that one of the commissioners

1 actually has the nerve to ride around on top of a
2 compressed cylinder of hydrogen gas. My hat is off to
3 you, sir. I hope you have lots of life insurance.

4 This whole hydrogen thing needs a lot more work
5 obviously.

6 The other thing, the piece of testimony from
7 Chief Brierty, a fire at this plant is an virtual
8 certainty; that was Dr. Greenberg, and Chief Brierty
9 didn't seem to dispute it. I mean, we'll all look for
10 this -- I live just west of the plant, and I'll look for
11 the bright shining star in the middle of the night
12 emerging over my home.

13 The other I had concern with was the 1,244 acre
14 feet inflow testified to by Mr. Byall that was going to be
15 somehow interrupted, disturbed, impounded or disrupted.
16 Well, that 1,244 acre feet of water is what's holding most
17 of that alluvial fan together. That water comes in, sinks
18 down, brings sediment, nurtures plants, animal eat the
19 plants, the plants provide habitat. Without that water,
20 that whole ecology is threatened, not just from one little
21 road.

22 And Dr. Poff had a wonderful presentation on
23 desert pavement, which I thoroughly concur with, having
24 used up all of my Auto Club calls for getting my cars
25 unstuck in the northern desert here during my work for the

1 census.

2 I heard someone on the telephone talking about
3 CEQA. Well, CEQA is something that is near and dear to my
4 heart, as the County of San Bernardino knows. But one
5 thing I would like the commission to give special
6 attention to, especially since Mr. Blewett, with whom I
7 have never agreed on with anything, as a member of the
8 planning commission, he says there's a million acres of
9 high desert land that is subject to solar, solar
10 applications. That's a lot of territory. Most of it's
11 not lived on by people, but you do have another
12 constituency. They're right outside. So the cumulative
13 impacts of all of this development converging on an
14 incredibly fragile and non-recoverable part of the world,
15 cannot be underestimated.

16 You can't imagine how long it takes for animals
17 to adapt. That is another reason why the desert tortoise
18 isn't doing well on relocation. If he's hungry and he
19 can't find what he wants to eat, he can't run over here to
20 In-N-Out like I can, and do frequently. He has evolved a
21 digestive system which is adapted to the particular plant
22 life that he has found for 250,000 years in this area,
23 according to the people at Calico Early Man site.

24 So when you interrupt or change either that
25 environment or his location -- and he doesn't really have

1 an immune system as we understand an immune system to
2 function, he's dead meat. He's sick, he's tired, and he's
3 going to get caught by something that has him on the menu.
4 Okay?

5 I think the 90 percent fatality rate for these
6 desert tortoises is probably understated. I think the two
7 year and five year survivability of a relocated tortoise
8 is about zero. And there's a lot of shells out there that
9 tells me that's exactly what's happening.

10 So I want to thank you for this opportunity to
11 testify, and I will answer any questions anyone has.

12 COMMISSIONER EGGERT: Well, thank you very much,
13 Mr. Coffey. We do appreciate your participation, and we
14 also appreciate your recognition of the effort that's been
15 made to have these hearings within the local community
16 nearby the project site. So very eloquent, and I can tell
17 you're very passionate about the land around here, and
18 appreciate your observations.

19 MR. COFFEY: Thank you.

20 COMMISSIONER EGGERT: Okay, Hearing Officer
21 Kramer, we're, I guess, just closing with the --

22 HEARING OFFICER KRAMER: Well, let me just
23 identify for Mr. Basofin's sake, mark the exhibit with the
24 proposed changes to AQSE as Exhibit 307, and then the
25 changes that begin with Noise 1 as Exhibit 308.

1 MR. BASOFIN: Was that 308?

2 HEARING OFFICER KRAMER: 308 --

3 MS. HOLMES: Hearing Officer Kramer, I wonder if
4 it wouldn't be better to identify them individually since
5 we didn't number the pages.

6 HEARING OFFICER KRAMER: You mean each
7 individually, each separate condition change?

8 MS. HOLMES: Yeah. I think there's just three
9 others.

10 HEARING OFFICER KRAMER: No, I -- well, they're
11 one document, right? And I will -- when I list them in
12 the exhibit list, I will list the particular conditions
13 that are proposed for amendment.

14 MS. HOLMES: Okay.

15 HEARING OFFICER KRAMER: It's more than three.

16 MS. HOLMES: It's four all together, I believe.
17 There were three others in addition to the Noise 1. So
18 the two noise conditions.

19 HEARING OFFICER KRAMER: Right.

20 (Staff's Exhibits 307 and 308 were marked for
21 identification.)

22 MS. HOLMES: I also wanted to let you know that I
23 misspoke when I identified Exhibit 306. I identified it
24 as figures 5A and 5B from the biological resources
25 section. It really was the soil and water resources

1 section.

2 HEARING OFFICER KRAMER: Okay. And I'll get to
3 how we're going to handle the exhibits in just a moment.

4 So that was, you said soil and water then?

5 MS. HOLMES: Exhibit 306 was the replacement for
6 Figure 5 with Figure 5A and 5B that was discussed in the
7 soil and water resources section earlier this afternoon
8 and was distributed the morning that the hearing started.

9 HEARING OFFICER KRAMER: Okay. What I'm going to
10 do for the exhibits -- first of all, for Mr. Basofin to
11 finish that thought, you're welcome to submit your
12 comments if you have concerns about these proposed changes
13 to the conditions, circulate them in advance of the next
14 hearing, and we can briefly discuss them at that hearing,
15 if it's necessary. If you have legal arguments to make,
16 then include those in your comments.

17 MR. BASOFIN: Okay. And to what effect are the
18 comments? I mean, are the comments going into the record?
19 Will we have an opportunity later to brief the conditions
20 themselves?

21 HEARING OFFICER KRAMER: We just have the one
22 briefing opportunity in this case because of the schedule
23 that we've been -- we need to adopt to meet some of the
24 other goals that I won't repeat again, but you're all
25 aware of what those are. So if you want to brief

1 something, put it in the brief that's going to be due on
2 August 18th.

3 MR. BASOFIN: Okay. That was my understanding,
4 so I think we're clear.

5 HEARING OFFICER KRAMER: Okay. Good.

6 As far as the exhibit list goes, I think various
7 parties have circulated, staff, CURE, and others have
8 circulated documents via e-mail after the pre-hearing
9 conference. And rather than spend our time today trying
10 to sort all that out, what I propose to do is I will
11 produce a new exhibit list on Monday or Tuesday, circulate
12 that among the parties, you'll see all the documents. And
13 I ask that -- I will ask in my e-mail that everybody
14 indicate prior to the next hearing if you have any
15 objections to the admission of any particular documents,
16 and then we can deal with those objections at the hearing
17 on the 18th.

18 MS. FOLEY GANNON: Hearing Officer Kramer, we
19 have one other document which we can offer into evidence
20 today. We have copies of the Final Environmental Impact
21 Statement was published today. And we have copies of it
22 on disc that we can give to all the parties --

23 MS. HOLMES: I'm sorry, Ms. Foley Gannon, I'm
24 having trouble understanding you. Could you speak a
25 little more slowly?

1 MS. FOLEY GANNON: Sure.

2 MS. HOLMES: Never mind. Somebody has handed me
3 something.

4 MS. FOLEY GANNON: They have handed you a disc
5 which has the Final Environmental Impact Statement --

6 MS. HOLMES: Indeed it does.

7 MS. FOLEY GANNON: -- and so we are offering that
8 into evidence. And we will be distributing discs here as
9 well for all the parties.

10 HEARING OFFICER KRAMER: Okay. I think we can
11 take official notice of that, but given that it's likely
12 to be something that people are going to want to cite in
13 their briefs, it might be more convenient for it to have
14 an exhibit number. And that would be -- we're not quite
15 caught up, but I think the applicant probably has some
16 exhibits that they've circulated that have not yet been
17 given a number, but let's give the FEIS Exhibit Number 95.

18 (Applicant's Exhibit 95 was marked for
19 identification.)

20 HEARING OFFICER KRAMER: And again, I'll produce
21 the revised exhibit list early next week that will
22 incorporate all the documents that I think have been
23 offered, and people can then -- they can tell us which if
24 any of those they might be objecting to. And they can
25 also tell us which documents did not make the list that

1 they think should have made the list. And then we'll work
2 out the details at the August 18th hearing.

3 Does everybody understand that approach?

4 MR. BASOFIN: Yes.

5 I have a question concerning the August 18th
6 hearing, and this is, I think, a clarification from our
7 discussion yesterday.

8 We're now -- we've now basically tabled
9 discussion of the translocation plan to August 18th, which
10 is the same date that our briefs are due, which would
11 preclude us from including any evidence that goes into the
12 record on the 18th from being in our briefs. And I just
13 want to raise that perhaps again as a concern. And I'm
14 wondering if there's --

15 HEARING OFFICER KRAMER: Well, to the extent you
16 anticipate legal issues -- your briefs are to be about
17 legal issues and applying the law to the facts.

18 MR. BASOFIN: I do anticipate legal issues.

19 HEARING OFFICER KRAMER: Okay. Well, brief the
20 laws you believe it should be in your brief. And then
21 there will be an opportunity on the 18th for you to offer
22 any additional argument that you need to make.

23 And also, I will note that what results from
24 these hearings is a presiding member's proposed decision,
25 which has a 30-day comment period; so you are free to

1 offer further thoughts during that comment period, that's
2 not your last opportunity to address us with whatever you
3 think you need to tell us about applying the law to the
4 facts.

5 MS. SMITH: Mr. Kramer --

6 MS. HOLMES: Hearing Officer Kramer, this is
7 Caryn Holmes in Sacramento.

8 HEARING OFFICER KRAMER: Hold on.

9 Gloria Smith was about to speak.

10 MS. HOLMES: I'm sorry, I couldn't hear her.

11 MS. SMITH: Gloria Smith.

12 Do you have a preference of when we submit
13 comments on the translocation plan? These are substantive
14 comments, not legal arguments.

15 HEARING OFFICER KRAMER: If you can submit them
16 sooner, I think that will help us all prepare for the
17 hearing.

18 MS. SMITH: So try to have them in by the 18th,
19 and then we'll talk about comments there, talk about the
20 translocation plan there.

21 HEARING OFFICER KRAMER: Yeah, I mean, you are
22 under no obligation to comment. We weren't thinking about
23 a comment period on the translocation plan as such, but if
24 you want to preview -- you can offer additional testimony
25 if you need to. You know, by having the plan so late,

1 I'm -- we're not going to entertain objections from the
2 applicant that you're precluded from providing additional
3 testimony. I think just to make the process run better,
4 the sooner you can provide the testimony you think you
5 need to provide to us, the better.

6 MS. SMITH: Okay.

7 HEARING OFFICER KRAMER: But if you bring it on
8 the 18th, the applicant's going to have to deal with it.

9 MS. FOLEY GANNON: We're not objecting to that.

10 HEARING OFFICER KRAMER: Ms. Holmes?

11 MS. HOLMES: Thank you.

12 I just wanted to note that as a result of the
13 hearings over the past three days, on the 18th the
14 committee is not only going to be hearing cultural
15 resources and traffic and transportation, but also glint
16 and glare, and the glint and glare study will affect
17 visual resources, traffic and transportation, worker
18 safety and fire protection.

19 We also have unresolved issues with respect to
20 hazardous materials management and worker safety and fire
21 protection conditions of certification. And the committee
22 left open the record for people to respond to Exhibit 304,
23 which is our identification of future transmission
24 upgrades.

25 I'm going to suggest that as a result of that,

1 that the briefing date be moved from the 18th to the 25th.
2 I would note that for those of us that are involved in
3 both the Imperial and the Calico project, we now have
4 scheduled for the 18th a Calico, hearing which is likely
5 to take more than, I would guess, eight hours, an Imperial
6 brief, and a Calico brief. So I think giving that timing
7 issue as well as the fact that there's likely to be a
8 number of issues that are raised at the Calico hearing on
9 the 18th, I'd like to suggest that the briefing be moved
10 to the 25th.

11 MS. MILES: I would urge you to adopt that
12 recommendation. That would be much more amenable to us as
13 well.

14 MS. SMITH: Sierra Club seconds.

15 MS. FOLEY GANNON: Hearing Officer Kramer, our
16 concern would be that we know you're working to get a
17 proposed decision by the 30th, and we would be fearful
18 that getting you briefs on the 25th would probably not be
19 of as great an assistance to you.

20 HEARING OFFICER KRAMER: Well, actually, the
21 target for the publication for the PMPD is the 24th.

22 MS. FOLEY GANNON: So the 25th would not be
23 helpful.

24 HEARING OFFICER KRAMER: It would be interesting,
25 I guess, but --

1 MS. SMITH: Mr. Kramer, from intervenor's
2 perspective, we heard kind of the same ambitious schedule,
3 similar ambitious schedule at Ivanpaw, and then it turned
4 out to be some entire four months or something; so we're
5 on this fast -- we're on the fast track, and then
6 sometimes the committee not so much. So we would ask for
7 just those couple additional days.

8 HEARING OFFICER KRAMER: Stand by.

9 (Discussion off the record.)

10 HEARING OFFICER KRAMER: Okay. We'll go -- we
11 were on the record, but hopefully we weren't burning too
12 much tape. Okay. We're back.

13 What the committee can do is extend the briefing
14 deadline until August 20th. And that will require
15 delivery by e-mail on the 20th so that the committee can
16 be processing your efforts over that weekend.

17 So I was going to be issuing a revised notice
18 anyway because another item we need to discuss with the
19 parties, as Ms. Holmes points out, we have increased the
20 workload on the 18th I think it's fair to say from what
21 was initially expected, and the committee would like to
22 start the hearings on the 18th at 9:00 a.m. instead of the
23 current 10:00 a.m.

24 Does anybody have a problem with that? These
25 would be in Sacramento.

1 MS. HOLMES: No.

2 MS. FOLEY GANNON: No.

3 HEARING OFFICER KRAMER: Okay. So what I will be
4 doing is sending out a new order or a new notice of the
5 hearing on the 18th, and in that we will also confirm that
6 the briefs are due at 5:00 p.m. on August 20th.

7 MS. FOLEY GANNON: Hearing Officer Kramer, one
8 other scheduling question.

9 Mr. Meyer was going to work on putting out a
10 notice about the workshop times. I was wondering if
11 there's been any decision made about the proposed times.

12 HEARING OFFICER KRAMER: That's a good question.

13 MR. MEYER: It is Christopher.

14 Yeah, we realize we needed to move that earlier,
15 so we moved that to 8:00 eastern time.

16 Okay. Well, let's keep it at 8:00 Pacific.

17 We did figure the notice out, but apparently we
18 had a long backlog in dockets today, so it is just getting
19 docketed this afternoon. So it's a combined -- well, it's
20 not a combined workshop, it's a serial workshop as
21 requested starting at 8:00 on August 10th in the Bonderson
22 building here in Room 102, and at 1:00 from Imperial into
23 the Calico discussion.

24 MS. FOLEY GANNON: Thank you.

25 MR. MEYER: And go as long as necessary.

1 MS. FOLEY GANNON: Thank you, Mr. Meyer.

2 HEARING OFFICER KRAMER: Okay. We've covered the
3 hearing date and that.

4 Did we have -- a while ago there was a gentleman
5 from the one of the unions who wanted to speak on public
6 comment. And I -- has he left?

7 Okay. Sorry.

8 Did we have anyone else who wishes to make a
9 public comment?

10 Okay. Any other business from the parties?

11 Okay. Enjoy yourself at the workshop on the
12 10th. And we will see you at 9:00 a.m. on the 18th.

13 Commissioner Eggert, did you want to --

14 COMMISSIONER EGGERT: Yeah, just a couple of
15 quick comments.

16 Again, I want to thank everybody. It's been a
17 long week, but also a productive one, and I think we've
18 gotten quite a bit information into the record. Obviously
19 we still need some additional items, so both the workshop
20 and the subsequent hearing, I think, hopefully will
21 provide that opportunity to bring forward that information
22 that we need for a proper decision.

23 Again, I think we pretty much stayed ahead of the
24 anticipated time that was put forth in the pre-hearing
25 conference. Again, I want to just sort of thank everybody

1 for the efficient use of time.

2 Obviously this is a very, very complex project,
3 very, very challenging in terms of the various impacts and
4 the proposed mitigation. Certainly from the state's
5 perspective, we see -- this is both a very exciting time
6 and a very challenging time, exciting in that we're sort
7 of seeing an unprecedented level of activity and
8 investment and renewables technologies, we're seeing a lot
9 of different ideas come forward. And, you know, that's
10 important. We want to have -- we need to have that type
11 of activity if we're going to achieve our greenhouse gas
12 goals, if we're going to achieve our energy and renewables
13 goals.

14 And so it's -- we're in that rare situation in
15 which we do have a lot of different things going on, and
16 we want to make sure that we address them properly, to the
17 extent that they're within our jurisdiction, that we are
18 sort of balancing the need for this energy generation with
19 its impacts on the environment. And we do take that very,
20 very seriously as well as all the other associated impacts
21 that fall under our jurisdiction.

22 So I do note that my colleague and fellow
23 Commissioner Byron is on the WebEx.

24 Did you have anything to add, Commissioner Byron?

25 COMMISSIONER BYRON: I don't, Commissioner. I

1 just -- sorry I couldn't be with you there today, but
2 everyone has shown tremendous patience and perseverance,
3 and I'd certainly like to extend my thanks to everyone for
4 getting through all the issues.

5 COMMISSIONER EGGERT: Okay.

6 MR. MEYER: Commissioner, this is Christopher
7 Meyer of the energy commission.

8 I just wanted to ask a clarifying question based
9 on a message I just got from the applicant.

10 Is the applicant now requesting a cultural
11 resource workshop, a second workshop?

12 MS. FOLEY GANNON: We have not made that request.
13 We said we were considering it, and we understand the
14 cultural resource section will be released on Monday. And
15 we will take a look at it immediately.

16 MR. MEYER: Yeah, we would need the committee to
17 waive the -- to those -- once I take a look at it, if I
18 notice that I need to notice ten days --

19 MS. FOLEY GANNON: Is there a way we can waive it
20 as -- that the -- that the workshop could happen as needed
21 and then we could have --

22 MR. MEYER: There are people in front of you
23 there that could answer that.

24 HEARING OFFICER KRAMER: I think we could give
25 you that go ahead and waive the requirement right now. So

1 if you do need to notice a cultural workshop between now
2 and the hearing on the 18th, you are authorized to do so
3 regardless of the length of notice that you can give.

4 MR. MEYER: Can we do that just by an e-mail
5 notice to the group and then post it on the website?

6 HEARING OFFICER KRAMER: You mean as opposed to
7 mail to all the -- do those notices go to all the property
8 owners? Mass mailing, you mean?

9 MS. HOLMES: No, but there's quite a few people
10 on the service list who receive hard copies through the
11 U.S. mail, and what we're suggesting is that we -- is that
12 in addition to waiving the timing requirements, you also
13 waive the requirement that we stick physical copies in the
14 mail and we simply provide e-mail notice and post it on
15 our website.

16 HEARING OFFICER KRAMER: I think that's part of
17 the general rule -- well, no, that's only for the e-mail
18 preferred people. Okay. In the case of people who have
19 an e-mail address, you can only -- you can e-mail them
20 only, but you do need to mail to the people who have not
21 provided an e-mail address.

22 MR. MEYER: And finally on this one, so that
23 we're not scrambling at the last moment, while everyone's
24 here, I mean, does the 11th or 12th work for people?

25 MS. FOLEY GANNON: The 12th could work for the

1 applicant.

2 MR. MEYER: Okay. Do we want to set tentative
3 the 12th?

4 Any other parties?

5 HEARING OFFICER KRAMER: Tell you what, the
6 committee's going to go off the record, and you can
7 continue to use the audio system to work that out. But
8 thank you.

9 Our hearing is adjourned.

10 (Thereupon the hearing adjourned at 4:07 p.m.)

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CERTIFICATE OF REPORTER

I, TROY RAY, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing Evidentiary Hearing Before the California Energy Resources Conservation and Development Commission, that I thereafter had it transcribed under my direction.

I further certify that I am not of counsel or attorney for any of the parties to said meeting, nor in any way interested in the outcome of said meeting.

I WITNESS WHEREOF, I have hereunto set my hand this 11th day of August 2010.

TROY RAY
AAERT CER**D-369