

CONTINUED EVIDENTIARY HEARING
BEFORE THE
CALIFORNIA ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:)
)
Modification of Certification) Docket No.
Starwood-Midway Energy Project) 06-AFC-10

)

CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CALIFORNIA

MONDAY, NOVEMBER 19, 2007

1:03 P.M.

Reported by:
Peter Petty
Contract No. 170-07-001

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

COMMITTEE MEMBERS PRESENT

Jeffrey D. Byron, Presiding Member

John L. Geesman, Associate Member

HEARING OFFICER AND ADVISORS

Garret Shean, Hearing Officer

Laurie ten Hope, Advisor

STAFF AND CONSULTANTS PRESENT

Jared Babula, Staff Counsel

Che McFarlin, Project Manager

James Adams

Shahab Khoshmashrab

Steve Baker

Richard Anderson

Keith Golden

PUBLIC ADVISER

Nick Bartsch

APPLICANT

Allan J. Thompson, Attorney

Richard H. Weiss, Project Manager
Starwood Power-Midway, LLC
Starwood Energy Group

J.J. Fair, General Manager
Ron Watkins
CalPeak Power
Starwood Energy Group

APPLICANT

Angela Leiba
URS Corporation

ALSO PRESENT

Russ Freeman (via teleconference)
Westlands Water District

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

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1 P R O C E E D I N G S

2 1:03 p.m.

3 PRESIDING MEMBER BYRON: Good afternoon
4 and welcome to an evidentiary hearing of the
5 Starwood-Midway Energy project. I'm Commissioner
6 Byron, the Presiding Member on this project. And
7 with me is Commissioner Geesman and my Advisor,
8 Laurie ten Hope. I'll turn this over to our
9 Hearing Officer Garret Shean.

10 HEARING OFFICER SHEAN: Thank you,
11 Commissioner. This is the continued evidentiary
12 hearing from October 30th in the Starwood-Midway
13 Energy project AFC. According to the notice that
14 we had put out, we will be hearing water resource
15 items which are a contested issue between the
16 parties.

17 There are a couple of preliminary and
18 housekeeping matters, but first we'd like to get
19 the introductions of the parties, and we'll begin
20 that with the applicant.

21 MR. THOMPSON: Thank you very much. My
22 name's Allan Thompson, counsel to Starwood in this
23 proceeding. To my right is Mr. Richard Weiss, who
24 is Project Director. Directly to my rear, Ron
25 Watkins on the left, who is with CalPeak and works

1 with Starwood; Angela Leiba, who is with URS, and
2 is the environmental project lead; and J.J. Fair,
3 on the right-hand side, who is also with CalPeak.
4 And I think he's Chief Engineer for the project.

5 HEARING OFFICER SHEAN: All right.
6 Commission Staff.

7 MR. BABULA: I'm Jared Babula, Staff
8 Counsel. Sitting next to me is Che McFarlin, the
9 Project Manager for this project.

10 HEARING OFFICER SHEAN: I might just
11 note we have a representative here from the
12 Commission's Public Adviser's Office, Mr. Nick
13 Bartsch. If there are members of the public here
14 who wish to participate in the hearing today,
15 please contact him. All I see are familiar faces,
16 so unless someone else comes in later Nick will
17 take care of that person.

18 Is there anybody on the phone at this
19 time? Let me indicate we hear no one on the
20 phone. But my understanding is it has been set
21 up. We have -- at least it appears to have been
22 set up.

23 All right. In addition to the water
24 resources item, it occurred to me in this interim
25 period that there were a couple of matters that

1 needed to be taken care of as a housekeeping
2 matter.

3 The first had to do with the contract
4 between the applicant and the owner of the
5 fiveplex with regard to the relocation of tenants,
6 since we have several conditions that are reliant
7 upon that. And I wonder if the applicant has
8 brought that today and can provide it.

9 MR. THOMPSON: We do have a copy with a
10 cover that indicates that it's a confidential
11 document. I think it was docketed last November
12 6th as a confidential document. We have a copy
13 here today, and Mr. Weiss will swear to that if
14 you want it as an exhibit.

15 HEARING OFFICER SHEAN: That is November
16 2006?

17 MR. THOMPSON: Yes.

18 HEARING OFFICER SHEAN: All right.
19 Well, if it's confidential I don't think we want
20 to put that on the public record. But if you can
21 just summarize, perhaps, what we understand to be
22 the relevant provisions -- or let me say, it
23 appears, based upon the testimony that we
24 currently have and conditions that we have, that
25 the applicant and the owner of the building have

1 entered into a contract whereby the applicant will
2 pay for the relocation of the current tenants in
3 the building, at least for the period of
4 construction of the facility.

5 So let's just start it from appear to be
6 their grading or site mobilization until the
7 commercial operation of the facility. And that it
8 will be at some distance from the facility, but I
9 guess is as nearby as is convenient or sought by
10 the tenants?

11 MR. THOMPSON: Yes. I would actually
12 like Mr. Weiss to respond to that. And I don't
13 know if you want to put him under oath.

14 HEARING OFFICER SHEAN: Yes, please.
15 Have you been previously sworn?

16 MR. WEISS: No, sir.

17 HEARING OFFICER SHEAN: Okay.

18 Whereupon,

19 RICHARD WEISS
20 was called as a witness herein, and after first
21 having been duly sworn, was examined and testified
22 as follows:

23 DIRECT EXAMINATION

24 BY MR. THOMPSON:

25 Q Mr. Weiss, for the record, would you

1 please indicate your name and your position with
2 regard to the Starwood project?

3 A My name is Richard Weiss and I'm the
4 Project Manager on behalf of Starwood for the
5 Midway project.

6 With respect to your questions about the
7 existing lease, or actually it's an option to
8 lease, the fiveplex unit that's immediately
9 adjacent to our site, we have that option. And
10 when we exercise that option the owner of the
11 property and the owner will move the existing
12 tenants to existing housing elsewhere in the area.

13 And that's the agreement we have. And
14 we will pay him rent for the existing fiveplex.
15 And we have the right to use the fiveplex for
16 things other than residential purposes.

17 HEARING OFFICER SHEAN: Are there any
18 incentives granted to the tenants for being
19 relocated?

20 MR. WEISS: No. There's not an
21 incentive to them. They are current employees --
22 the owner of the property owns this fiveplex and
23 they are employees of his. And, you know, he
24 likes them nearby because it's convenient to work
25 on the property. And he'll relocate them to

1 existing housing in the area.

2 HEARING OFFICER SHEAN: Is there a
3 provision in the agreement that would allow
4 tenants or other occupants to return to that
5 building at a certain time that your lease option
6 would essentially expire at a certain point?

7 MR. WEISS: Our lease coincides with the
8 length to the PA. So, --

9 HEARING OFFICER SHEAN: All right, the
10 power purchase agreement with PG&E.

11 MR. WEISS: Power purchase agreement.
12 We do have the ability to get out of the lease if,
13 in fact, we show that -- noise is the issue. And
14 if, in fact, we can show that the noise is not a
15 problem for the fiveplex then we can, you know,
16 exit the lease and turn it back to the landowner.

17 HEARING OFFICER SHEAN: All right.
18 That's sufficient. Do you have any questions from
19 the staff? Any questions on this issue?

20 MR. BABULA: That's it for -- we're not
21 clear it's confidential. Was there a
22 confidentiality was issued for that or was it just
23 confidential because the --

24 MR. McFARLIN: My understanding is when
25 it was originally submitted it was submitted under

1 a confidential header. And that was my
2 recollection.

3 MR. THOMPSON: That's my understanding,
4 as well.

5 MR. McFARLIN: I don't believe it was
6 granted confidentiality, however, but I could be
7 mistaken on that.

8 MR. THOMPSON: I just looked at the
9 dockets and it said a confidential filing.

10 MR. McFARLIN: Yeah, they're all
11 docketed as such, but you, of course, would have
12 received a letter back from the Commission --
13 you'd have received a letter back whether or not
14 it was granted confidentiality. But, of course,
15 that wasn't my responsibility so I can't speak
16 directly to that. But I don't know if that's
17 pertinent to this proceeding, either.

18 HEARING OFFICER SHEAN: Well, this
19 testimony is sufficient for our purposes. So if
20 it either has been designated confidential, we do
21 not need that changed. Based upon the information
22 we've had, it doesn't seem to have resulted in a
23 loss of any confidential status. So, for our
24 purposes, that's fine.

25 And I had another item, but it seems we

1 have several members of staff who are here that
2 have supplied revised conditions. So what I'd
3 like you to do, Mr. Thompson, is indicate the
4 modified condition language that you don't have
5 any problem with. So that is the staff, who are
6 present here, wish to leave, they may.

7 MR. BABULA: We would like to just have
8 them testify to get it into the record so that
9 it's clear what the change was. It might be
10 short, but I was kind of hoping that to call each
11 one of these sections quickly. Have staff come up
12 and just indicate what the change was, how it's
13 different. So that somebody, in the future,
14 looking at the record, can see what happened
15 between the FSA and the final document.

16 MR. THOMPSON: Mr. Shean, as for
17 applicant, we don't have any issues and no cross-
18 examination and no question for the noise and
19 vibration, air quality and waste management
20 conditions of certification.

21 HEARING OFFICER SHEAN: I'm sorry,
22 noise, air quality --

23 MR. THOMPSON: And waste management.

24 HEARING OFFICER SHEAN: -- waste.

25 MR. THOMPSON: And we'd stipulate to

1 their --

2 HEARING OFFICER SHEAN: And apparently
3 they've just made some comments on your traffic
4 and transportation conditions. Have you had an
5 opportunity to look at those?

6 MR. McFARLIN: I've got those now. I
7 can --

8 HEARING OFFICER SHEAN: All right, why
9 don't you give them to them so they can at least
10 look at it.

11 MR. McFARLIN: Okay.

12 HEARING OFFICER SHEAN: I just got it
13 because I opened up the emails today.

14 (Pause.)

15 HEARING OFFICER SHEAN: All right,
16 rather than deal with that, if you want to present
17 them as witnesses I think what we have to do is
18 move through what we have to do, and then either
19 come back to that simply because we want to afford
20 the parties an opportunity on the matters that
21 we're scheduled here for today.

22 And the other option is for you to just
23 describe for each subject what you think the
24 changes are, because the Committee and the
25 Commission do not regard conditions as an

1 evidentiary matter. It's not a matter that is
2 factual for the Commission. They are entirely
3 within the discretion of the Commission and the
4 Committee to formulate the Commission's
5 certification, so that they are not evidentiary in
6 nature and do not -- in that sense the witness
7 from the staff would not be stating a fact that is
8 necessary for the Commission to make a decision.

9 And to a large extent the reason for the
10 changes that you've made are evident from the face
11 of the changes. So, anyway, we'll hold that, and
12 we'll keep moving forward.

13 With respect to another item related to
14 water and water resources was the matter of the
15 construction water. I looked through both the FSA
16 and the AFC with regard to the source and amounts
17 of construction water to be used and could not
18 find that.

19 And I asked the parties to provide some
20 information on that. And do you have that?

21 MR. THOMPSON: We do. If I could ask
22 Mr. Weiss to respond to that.

23 DIRECT EXAMINATION - Resumed

24 BY MR. THOMPSON:

25 Q Mr. Weiss, would you answer the question

1 of the amount of the construction water that you
2 would anticipate, and where that would come from?
3 And also if you could address where the potable
4 water will come from for the construction.

5 A Yes. The potable water will be bottled
6 water delivered -- potable water will be bottled
7 water delivered to the site for the construction
8 employees.

9 For dust control we don't have a
10 specific source of that water. We could use
11 CalPeak's water; we could hire the local
12 landowner, Barry Baker, to supply water. Or the
13 EPC contractor may, in fact, have their own supply
14 of local water to keep the dust down.

15 There are basically two periods when we
16 would be spraying water to keep the dust down.
17 One would be during civil works, prior to
18 installation of foundations. That period is about
19 eight weeks in length. And during that period
20 we'd expect to use about 4000 gallons a day for a
21 total amount of water of about 160,000 gallons.

22 Also during the mechanical and
23 electrical and erection phase there's some soil
24 disturbance to put pipes in the ground, to run
25 wires. That's a little longer period, more like

1 24 weeks. But we would use less water during that
2 period because there's less soil disturbed. And
3 we would expect to use about 140,000 gallons of
4 water during that period.

5 Total consumption for water for dust
6 control is about 300,000 gallons during the
7 construction period.

8 HEARING OFFICER SHEAN: All right.
9 Thank you. Do you have any questions of the
10 witness on that?

11 MR. BABULA: No questions.

12 HEARING OFFICER SHEAN: All right.
13 Thank you very much.

14 All right, now we're going to move to
15 the meat of the hearing which is the water
16 resource section, and go first with the applicant,
17 since it bears the burden of proof.

18 And I think at this point what we'd have
19 you do is identify the documents that you wish to
20 introduce into the record.

21 MR. THOMPSON: Thank you very much.
22 Basically we have two documents. One is a
23 document entitled, alternative water supply
24 analysis, dated October 18, 2007. The witness for
25 that will be Ms. Angela Leiba of URS.

1 I don't know if you want me to have her
2 sworn and testify to that right now.

3 HEARING OFFICER SHEAN: Not yet. We're
4 just going through an identification of documents.

5 MR. THOMPSON: The second document, and
6 final document, I believe, is a letter dated
7 November 9, 2007, that has three attachments to
8 it.

9 One is a hazardous material information
10 for the alternative water supply pipeline
11 alignment. The second are our proposed
12 transportation conditions of certification. And
13 the third is a letter from Mr. Barry Baker
14 regarding PAO investments and option agreements.

15 HEARING OFFICER SHEAN: All right. At
16 this point why don't we have you bring your
17 witness up and have her sworn in. She can
18 indicate her authorship of one of the documents.
19 And we'll go from there.

20 Whereupon,

21 ANGELA LEIBA
22 was called as a witness herein, and after first
23 having been duly sworn, was examined and testified
24 as follows:

25 THE REPORTER: Please state and spell

1 your full name for the record.

2 THE WITNESS: My name is Angela Leiba.
3 I'm with URS Corporation, and I am the
4 environmental consultant hired by Starwood.

5 DIRECT EXAMINATION

6 BY MR. THOMPSON:

7 Q Ms. Leiba, would you please briefly,
8 very briefly, describe the filing dated October
9 18th that you are sponsoring today.

10 A Yes. We submitted additional
11 information that we had identified in the original
12 AFC. We added additional information to talk
13 about the pipeline that would be generated, the
14 approximately two-mile pipeline, that would come
15 from that pond to our site.

16 So we additionally added in cultural
17 resource, biological information and other AFC-
18 related-type information to that regard.

19 Q And is it your conclusion that there are
20 no significant environmental impacts that would
21 result from construction and operation of this
22 pipeline?

23 A That is correct.

24 MR. THOMPSON: Ms. Leiba is tendered for
25 cross-examination.

1 HEARING OFFICER SHEAN: Let's do one
2 other thing here. I'm not certain, but I want to
3 make certain so that we've tied this up, whether
4 the last time we were together we left out the
5 portion of your AFC that dealt with water
6 resources. And I think that may be the case.

7 So, at this point let's go through and
8 ask with respect to the AFC section on water
9 resources and the testimony just offered now, is
10 there objection to its admission into the record?

11 MR. BABULA: No objection.

12 HEARING OFFICER SHEAN: Let's just cover
13 your other two items. Let me get to them. I
14 guess since we're in a contested proceedings here
15 it's probably just appropriate to indicate that
16 we're going to take a little closer look at the
17 evidentiary foundations for some of these
18 documents.

19 Now, your Baker letter. Obviously Mr.
20 Baker's not here, so the document apparently is
21 being offered for the truth of the matters that
22 are stated in the letter, but since there is
23 otherwise underlying supporting testimony now in
24 the record, it would be otherwise admissible.

25 So, is there objection to the admission

1 of the packet that includes the Baker letter and
2 the hazardous materials information and the
3 offered conditions?

4 MR. BABULA: There's no objection on the
5 Baker letter for purposes that they have an
6 agreement for the water.

7 HEARING OFFICER SHEAN: All right.
8 Then, they're admitted.

9 Do you have any questions of the witness
10 with respect to her testimony?

11 MR. BABULA: I do have two questions.

12 CROSS-EXAMINATION

13 BY MR. BABULA:

14 Q One being when you did the analysis of
15 the soils where the pipeline's going to run
16 through, was there analysis done, first of all?
17 And were there any findings of toxics, pesticides,
18 so forth?

19 A No. As we filed in our additional
20 information for hazardous materials, we had done
21 an original phase one, actually Kleinfelder had
22 done the original phase one, which opted out to
23 cover the entire cultural resource area
24 surrounding the site.

25 And we concluded that the pipeline would

1 also stretch through that existing agricultural-
2 type soil information, so we included that in our
3 submittal to show that in lieu of what had already
4 been found in that area, that that would likely be
5 found along the pipeline route, as well.

6 Q Okay. And my other question deals with
7 whether or not you're aware of Westlands Water
8 District, if they're going to be supporting or
9 opposing the sale of the water from the backwash
10 pond to --

11 MR. THOMPSON: I think Mr. Weiss could
12 address that, if that's appropriate --

13 MR. WEISS: -- not relevant to what
14 we've submitted here. That's not part of this --

15 MR. BABULA: The letter, I mean the
16 letter deals with selling water. And so it's --

17 MR. THOMPSON: Okay, I would ask that
18 Mr. Weiss answer that.

19 MR. WEISS: With respect to Westlands
20 we'd expect that -- well, actually I was going to
21 say we'd expect an agreement, but I can't say that
22 because currently Westlands is saying they have no
23 opinion on whether they have any right to this
24 water.

25 Mr. Baker already has rights to the

1 water and has acquired the water. And whether
2 Westlands has any right to it, they're uncertain.
3 And so in my conversations with them this morning
4 they've said they have no opinion.

5 So, they could have said, you know, we
6 think it's our water and it's under our purview.
7 Or they could have said, you know, no, we don't
8 have any rights to this water and therefore it's
9 totally out of our control.

10 They've elected to take the middle
11 ground at this point in time and say we don't have
12 an opinion. So, that's the status of it. I don't
13 have an answer as to whether they actually have
14 control or have rights or have an approval. They
15 may have none. We don't know that.

16 Our opinion, and our legal counsel have
17 told us they don't think that Westlands has any
18 rights. But we don't have that confirmed by
19 Westlands.

20 MR. BABULA: Fair enough. No further
21 questions.

22 ASSOCIATE MEMBER GEESMAN: I guess I
23 have a question on that last remark. You
24 characterized Westlands as saying that they had no
25 opinion at this point in time. So, does that

1 suggest that either they're going to look at it
2 further and perhaps provide some more definitive
3 comment? Or they just don't envision ever having
4 an opinion on this subject?

5 MR. WEISS: Yeah, I can't answer that.
6 I don't know whether they will ever come to an
7 opinion or not. The comment I got was that at
8 this time we don't have an opinion on it.

9 HEARING OFFICER SHEAN: I have a
10 question with respect to the project changes that
11 would result from the use of Baker water. I
12 understand from your discussion here that one
13 result of the use of the Baker water would be that
14 instead of using a lined evaporation pond based
15 upon the TDS levels of the water, that the project
16 now could use an unlined evaporation pond, which
17 would allow the water both to percolate into the
18 ground, as well as to evaporate into the
19 atmosphere, is that correct?

20 MR. WEISS: That's -- yes.

21 HEARING OFFICER SHEAN: Okay.

22 MR. WEISS: To clarify that response,
23 I'm sorry, the local regional water board has
24 given us that indication. But we haven't
25 confirmed that with them.

1 They want us to take a sample of a very
2 shallow aquifer, which is only a couple hundred
3 feet down, or a hundred feet down, and determine
4 what the water constituents are at that point.

5 And we expect that to be greater than
6 the aquifer that CalPeak uses, which is like 3400
7 TDS. And so we expect it to be greater than that.
8 And then they want to, the regional water board,
9 wants to look at that to make sure that the RO
10 discharge that we would have, which would be on
11 the order of 1100, 1200 TDS, is less than what's
12 in that aquifer. And under that criteria they
13 would allow us not to put in a lined pond.

14 So we expect that as the answer, but we
15 haven't gone through the steps. We're currently
16 waiting for a driller to show up to drill the well
17 so we can determine what the shallow aquifer TDS
18 water constituents are.

19 HEARING OFFICER SHEAN: Now, if, for any
20 reason, this Baker water either is not available
21 to you at the beginning of the project, or
22 sometime during the life of the project is no
23 longer available, is there anything about the
24 design that you currently plan that would
25 prohibit, for example, a retrofit that would allow

1 the use of the CalPeak water?

2 MR. WEISS: No, --

3 HEARING OFFICER SHEAN: A retrofit of
4 the evaporation pond.

5 MR. WEISS: Right. If, for some reason,
6 the Baker water wasn't available and we needed to
7 flip over to CalPeak, for example, if we didn't
8 have a lined pond we'd obviously put a liner in
9 the pond.

10 The pond will be there. It's just a
11 question of whether it's going to be lined or not.
12 And so we would, at that point, have to line the
13 pond, and we'd have to install some monitoring
14 wells. Those would be the steps we'd have to
15 take.

16 HEARING OFFICER SHEAN: Is there a
17 difference in the reverse osmosis and
18 demineralizing facilities for either Baker or
19 CalPeak water?

20 MR. WEISS: No, no.

21 HEARING OFFICER SHEAN: I have nothing
22 further. Do you have redirect?

23 MR. THOMPSON: No, we don't, thank you.

24 HEARING OFFICER SHEAN: All right, thank
25 you. All right, with that we'll go to the

1 Commission Staff.

2 (Pause.)

3 HEARING OFFICER SHEAN: All right. I'll
4 ask you to sort of go through the same exercise of
5 indicating what it is you want to introduce into
6 the record here today.

7 MR. BABULA: Okay. First I would like
8 to comment, address Commissioner Geesman's
9 question about what Westlands may or may not
10 determine what their policy is going to be.

11 My understanding was Westlands is
12 actually meeting today in a meeting to -- and one
13 of the topics of that meeting is to come up with
14 an opinion about their view on the use of the
15 backwash water for this power plant. So that
16 question may be answered sooner than later.

17 As for the documents to admit here, I
18 would like to have two --

19 HEARING OFFICER SHEAN: Before you
20 continue on that theme, is it that they're going
21 to meet and discuss this and inform the Commission
22 of this? I assume, since your testimony is
23 obviously include contact with the Westlands Water
24 District, that you are in continuing contact with
25 them. Do you know what they're going to do? Are

1 they going to provide the Committee a letter, or
2 the staff, or what's coming?

3 MR. BABULA: Well, as of now, I was
4 originally, as I had indicated in the email, that
5 we were going to have a Westlands representative
6 speak on the conservation program. It's very
7 narrow, just the conservation program that we are
8 promoting. But they were not able to provide
9 anyone for that.

10 As for a letter, I was indicated a
11 letter would be provided to the Commission once
12 they've gone through their process there. So I
13 would anticipate that a letter would be
14 forthcoming. And it's possible someone could call
15 in today. They do have the information, so I
16 don't have specific knowledge of whether or not
17 someone from Westlands will call in. And I know
18 they're not going to be calling in regarding
19 anything that I was going to have them testify
20 about. So that's all I know right now.

21 HEARING OFFICER SHEAN: Has the staff
22 provided Westlands any of the documentation of the
23 proceeding, either the AFC or any of your
24 testimony?

25 MR. BABULA: They were provided with the

1 testimony that we're going to be -- the
2 supplemental testimony that was submitted
3 regarding the use of the backwash water. They
4 were given that as part of the process to testify
5 about the program.

6 I don't know if they have had a copy of
7 the AFC or the FSA.

8 HEARING OFFICER SHEAN: All right. Why
9 don't you go ahead then and --

10 MR. BABULA: Okay.

11 HEARING OFFICER SHEAN: -- indicate your
12 items.

13 MR. BABULA: All right. Well, before
14 introducing the witnesses regarding water, I just
15 want to give the Committee sort of a roadmap, an
16 overview, just to keep in mind while the staff
17 will be testifying on the more technical aspects.

18 This really has to do with what is state
19 water policy. Because as you'll notice in the
20 applicant's brief, our statements, there's a lot
21 of discussion about resolution 7558. And it's
22 important to remember that this is not a rule, a
23 law or a statute. It's a compass to provide
24 guidance for the management of the scarce water
25 resources in California.

1 And as with all policies and guidelines,
2 7558 is not a substitute for common sense, case-
3 specific analysis or creative problem solving.

4 In this case we're going to have
5 staff -- we'll be presenting evidence about inlet
6 fogging, that inlet fogging is cooling under the
7 laws of physics and under State Water Policy 7558.
8 The water issue in this case, the backwash water,
9 it's important to remember this is high-quality
10 water originating from the San Joaquin Delta,
11 which can be used for agricultural irrigation.
12 Bear in mind that in this case there's no such
13 thing as wastewater, only water that is wasted.

14 Finally, although the lower quality
15 water is available, staff is not opposed to the
16 use of this backwash water for the Starwood
17 project, in conjunction with an appropriate
18 conservation program. This will insure that high-
19 quality water is conserved for future use, while
20 allowing the Starwood project to use a cleaner
21 source of water, which saves the project money.

22 So first I would like to introduce our
23 power plant cooling panel, which will be made up
24 of Steve Baker and Richard Anderson. And their
25 testimony has been already filed, and I'd like to

1 enter that into the record at this time.

2 And we do have, as part of Mr. Baker's
3 testimony, there's going to be a short PowerPoint
4 presentation. And we have copies of that here.
5 We can pass that out now, if you'd like.

6 HEARING OFFICER SHEAN: Yes.

7 MR. BABULA: Okay.

8 HEARING OFFICER SHEAN: All right, so
9 this is going to be the supplemental testimony of
10 Steve Baker and Dick Anderson, is that correct?

11 MR. BABULA: Correct. And we'll need to
12 have the witnesses sworn in.

13 HEARING OFFICER SHEAN: All right.

14 Whereupon,

15 STEVE BAKER and RICHARD ANDERSON
16 were called as witnesses herein, and after first
17 having been duly sworn, were examined and
18 testified as follows:

19 HEARING OFFICER SHEAN: Before you
20 proceed, let's just make it clear what it is that
21 testimony includes. You've indicated, actually
22 within the testimony, itself, that exhibit A is
23 the resolution, the State Water Board resolution
24 7558, correct?

25 MR. BABULA: Correct.

1 HEARING OFFICER SHEAN: All right. And
2 you've also appended, even though you haven't
3 identified it as an exhibit, B, a letter from
4 Arthur Baggett dated May 23, 2002.

5 MR. BABULA: That's correct.

6 HEARING OFFICER SHEAN: All right. And
7 is it your proposal to include -- well, first of
8 all, we can take notice of the state policy,
9 that's not a problem.

10 Is it your intention to seek to
11 introduce this letter into evidence?

12 MR. BABULA: As an attachment to the
13 testimony, yes.

14 HEARING OFFICER SHEAN: Okay. And
15 what's the evidentiary purpose of the letter?

16 MR. BABULA: The evidentiary purpose of
17 the letter is to just demonstrate the evolution of
18 a policy; that a policy isn't a specific threshold
19 limit, 2 parts per million, so forth. It's not a
20 specific thing, it's a policy that shifts and
21 changes along with technology, along with the
22 current state of the facts.

23 So the letter, itself, isn't evidence
24 that something is or isn't cooling water, as the
25 technical staff will testify to. It's just a

1 demonstration that policy isn't locked and rigid.
2 And that's the purpose of the letter.

3 HEARING OFFICER SHEAN: I'm trying to
4 understand. Your representation of what it
5 represents, it includes -- or I mean the purpose
6 of this is that policy matters are not locked in,
7 is that a fair characterization of what you just
8 said?

9 MR. BABULA: Right. When I initially
10 began this section, remember that these are
11 guidelines, the policy's a guideline, and it's not
12 a substitution for common sense or for specific
13 analysis. And the letter just indicates that,
14 really. It just shows that the original policy
15 came out in the '70s. This letter came out in
16 2002. And it shows that things have changed,
17 technology has changed. But that's really
18 technical testimony from the staff here. And I'd
19 like them to speak to the --

20 HEARING OFFICER SHEAN: Well, but before
21 we're going to admit the letter -- first of all,
22 clearly it's hearsay, all right?

23 MR. BABULA: Right.

24 HEARING OFFICER SHEAN: Secondly, the
25 question is are you attempting to have it admitted

1 to state the truth of some matter within the
2 letter?

3 And you've indicated in your opening
4 here that you are not using this letter for the
5 purpose of indicating what is or isn't cooling
6 water as your witnesses will testify to.

7 MR. BABULA: That's correct, --

8 HEARING OFFICER SHEAN: Right?

9 MR. BABULA: -- the letter is hearsay
10 for the specific text of it regarding cooling
11 water and not cooling water. But just to show the
12 policy fluctuates and tries to parallel
13 technology.

14 HEARING OFFICER SHEAN: Well, let's go
15 back to your witnesses' offered testimony here in
16 writing. Because it indicates that this letter
17 made a clarification to state policy. Is that
18 still going to be the testimony of your witnesses?

19 MR. BABULA: Their testimony here -- the
20 letter isn't the main focus of their testimony.

21 HEARING OFFICER SHEAN: Well, the letter
22 is quoted extensively on the first page, and then
23 referred to again on the second page. And
24 specifically it says: This policy guidance" and
25 now that's referring to the IEPR "follows the

1 State Water Resources Control Board's
2 clarification letter regarding resolution 7558."
3 And uses the words cooling purposes by power
4 plants which does not differentiate between
5 cooling processes."

6 Now, I'm just trying to find out whether
7 or not you are intended to have this letter
8 introduced for the purpose of indicating that, as
9 a matter of fact, there is a clarification of
10 state water policy which would not differentiate
11 between cooling processes.

12 MR. BABULA: Well, the quote you read
13 was the IEPR's quoting the letter -- I'm not clear
14 what part you read.

15 HEARING OFFICER SHEAN: Well, let me --

16 MR. BABULA: But, regardless --

17 HEARING OFFICER SHEAN: -- just repeat
18 it then. If you're not clear, because I want you
19 to be clear on this. It says: This policy
20 guidance follows the Board's clarification
21 letter." So you've characterized this May letter
22 as a clarification letter.

23 And so the real question is, what is the
24 evidentiary fact that has been clarified by virtue
25 of the letter?

1 MR. BABULA: Well, the evidentiary fact
2 then would be that the water policy, you can't
3 apply the water policy in a rigid guideline as it
4 was set out in the '70s where it listed, I think
5 there's five levels of preferred water uses.

6 And the letter then just goes forth and
7 says, for example, I believe the letter indicates
8 ocean water, which is number two on the original
9 1970s water policy.

10 It's not -- I mean right now you
11 wouldn't consider an ocean as a second-best water
12 source to use. So it just goes on to an
13 evolution.

14 But I don't want to get hung up on this
15 letter and clutter the record or the Committee --

16 HEARING OFFICER SHEAN: Well, and
17 neither do we. Nor do we want --

18 MR. BABULA: Right.

19 HEARING OFFICER SHEAN: -- since the
20 applicant has already indicated in its responding
21 documents that they do not agree with your
22 interpretation of the letter, all right.

23 So, you have one interpretation of what
24 the letter means. They have a different. We
25 might have a third. And the real issue here is

1 this letter, if it's to be used to support a fact
2 on which the Commission can rely for the purpose
3 of making a finding, we have to know whether or
4 not this particular document can be admitted to
5 the record for that purpose.

6 That's why I asked you the purpose for
7 which you were seeking to admit it, which, as you
8 explained, was somewhat different from what the
9 testimony of your witnesses says is the function
10 of this letter.

11 And we have the fact that we know
12 there's a disagreement about how this letter
13 should be interpreted, which is fundamentally what
14 the issue is with respect to hearsay. And the
15 reason that hearsay is generally not admissible.

16 So, before the Commission and the
17 Committee are going to allow the establishment of
18 a record that will serve as the basis for
19 findings, we have to determine whether or not it
20 would be appropriate to admit this particular
21 letter for either the purpose that you stated
22 orally, or for the purposes reflected in the
23 statement of your witnesses.

24 Now, if Mr. Baggett is -- first of all,
25 he's not unavailable as a witness. He is a local

1 state employee and he could have been called to
2 support your interpretation of the meaning of the
3 letter.

4 But he's not here and he's not subject
5 to the cross-examination of the applicant, which
6 would allow, at least a fair exchange as to what
7 Mr. Baggett either meant by the letter. Or
8 whether or not he has an opinion of whether now
9 the State Water Board policy could include or does
10 include any cooling purpose. Or would include the
11 cooling purpose that the staff has identified in
12 its testimony.

13 So, I think since the letter, number
14 one, does not appear, based upon this decision, to
15 be serving, in your mind, a single purpose, but
16 multiple purposes, and the hearsay rule, as it
17 addresses that, would not allow its admission,
18 that with respect to your offer that it be
19 admitted into the record, it may not be
20 appropriate.

21 Do you want to chime in on this, Mr.
22 Thompson?

23 MR. THOMPSON: Yeah, we would. When I
24 filed a rebuttal, as you'll note in my rebuttal
25 brief, we looked at every case that has been

1 decided since the date of the letter.

2 I could find no reference to the letter
3 or the specific language that staff relies on
4 contained in that letter in any of the
5 following -- any discussion of any following case.

6 The letter, itself, the May 22nd letter,
7 whatever, is not mentioned in any of the LORS
8 tables in any of the cases that have been decided
9 since. And, indeed, was not included in the
10 staff's PSA.

11 ASSOCIATE MEMBER GEESMAN: When you say
12 cases, what are you referring to?

13 MR. THOMPSON: Final decisions of this
14 Commission from --

15 ASSOCIATE MEMBER GEESMAN: This
16 Commission.

17 MR. THOMPSON: -- May 22nd on. We don't
18 know if this letter was the result of an inquiry
19 in the 2003 IEPR; whether it was a specific siting
20 case. I don't know who was on the Siting
21 Committee at the time. We don't know any of the
22 relevant facts surrounding it, what the inquiry
23 was that prompted the letter.

24 I guess I think it's significant that
25 it's never appeared in print before in any of the

1 Commission documents.

2 I don't think it addresses technology.

3 I don't think it addresses any change in policy.

4 Indeed, the letter says, to my reading, that
5 they're happy with the state policy as it's being
6 administered by the Energy Commission.

7 So I would object to its admission and I
8 would object to testimony being based upon the
9 admission of that document.

10 HEARING OFFICER SHEAN: Do you want to
11 reply?

12 MR. BABULA: Yeah. I did see his list
13 of power plant cases that was cited and there's no
14 information or testimony regarding the facts of
15 any of those cases, and whether water was an
16 issue, and whether the letter would even have been
17 appropriate to be brought up in any of those
18 cases. I don't think that's that relevant.

19 But I don't want this to drag on about
20 this letter. And so if the Committee feels it's
21 inadmissible, then staff will be okay with that
22 decision.

23 ASSOCIATE MEMBER GEESMAN: You know, --

24 HEARING OFFICER SHEAN: You know, you're
25 still going to be able to make your pitch, which

1 is that the cooling purpose that you seek --

2 MR. BABULA: Right, that's just fine,
3 which is why I'd like to --

4 HEARING OFFICER SHEAN: -- is one that
5 should be offset by the, you know, use of the
6 Westlands Water District offset program. And so
7 while it doesn't prevent you from doing that, I
8 think what it appears to do, to the Committee, is
9 keep the record uncluttered, since there's no
10 basis, either arising from the language of the
11 letter, to get to the point where the nonhearsay
12 value of this letter exceeds the complications to
13 the record, since it does not appear that there
14 was a prior clarification or clarification
15 resulting from this letter that we can
16 historically, as we sit here today, turn around
17 and look and say that that occurred.

18 So, we will not admit the letter,
19 although it is in the administrative record of the
20 proceeding. And I think it's also appropriate
21 that any use of the letter, to the extent that it
22 states that the testimony of your witnesses is
23 based upon a clarification that is indicated in
24 the letter, be stricken. But you have lots of
25 additional testimony to that. So that would be

1 the ruling of the Committee. And we'll allow you
2 now to have direct testimony from your witnesses.

3 MR. BABULA: Okay, -- proceed now, thank
4 you. All right, let's start with Mr. Baker here
5 on power plant cooling then.

6 DIRECT EXAMINATION

7 BY MR. BABULA:

8 Q Can you please state your name.

9 A Steve Baker.

10 Q And who are you employed by?

11 A I'm a Senior Mechanical Engineer on the
12 Energy Commission Staff.

13 Q Okay. Can you please summarize your
14 background as it pertains to energy production,
15 power plants and power generating equipment.

16 HEARING OFFICER SHEAN: Just for the
17 sake of expedition, do you have any problem with
18 him testifying as an expert?

19 MR. THOMPSON: I think I've known him
20 for 30 years. I have no problem.

21 HEARING OFFICER SHEAN: Right, yeah.

22 MR. BAKER: Closer to 25, I think, yes.

23 MR. THOMPSON: Twenty-five.

24 HEARING OFFICER SHEAN: Okay, you're
25 qualified. And Mr. Anderson, any problem?

1 MR. THOMPSON: Same.

2 HEARING OFFICER SHEAN: All right.

3 MR. BABULA: Okay.

4 HEARING OFFICER SHEAN: Let's get to the
5 substance of testimony.

6 MR. BABULA: Okay.

7 BY MR. BABULA:

8 Q Did you prepare the power plant cooling
9 portion of the supplemental soil and water
10 testimony filed on November 9?

11 MR. BAKER: We did.

12 MR. BABULA: And is this testimony true
13 and correct to the best of your knowledge?

14 MR. BAKER: Yes.

15 MR. ANDERSON: Yes.

16 MR. BABULA: Okay. Do either of you
17 have any changes to make?

18 MR. ANDERSON: No.

19 MR. BAKER: No.

20 MR. BABULA: Okay. Mr. Baker, is inlet
21 fogging a form of cooling?

22 MR. BAKER: In my opinion, yes, clearly.

23 MR. BABULA: Okay. Can you please
24 summarize the power plant cooling, where inlet
25 fogging fits in in the process. I believe you

1 have a PowerPoint presentation?

2 MR. BAKER: Yes. Let me precede this by
3 saying that I began my career in power plant
4 engineering in June of 1974, a year before this
5 policy was promulgated. Back when the policy was
6 created in 1975 few, if any, power plants were
7 being built using gas turbines. Back then,
8 everything being built was a steam plant.

9 The steam turbine was powered either by
10 a boiler burning fossil fuel or by a nuclear
11 reactor. But when someone said power plant in
12 1975 they meant a steam power plant.

13 The gas turbine generator didn't become
14 popular until later. They weren't commonly
15 available in 1975. For instance, the General
16 Electric Frame 7E, which was the first wildly
17 popular gas turbine, of which there are many in
18 California today, was first offered for sale in
19 1976.

20 The predecessor to the project proposed
21 for this project, the Starwood project, the
22 turbopower FT8 twin wasn't offered until 1990.
23 So, gas turbines are newer and more modern than
24 the policy we're talking about.

25 Let me show you a slide. This is a

1 Rankine cycle or steam cycle power plant. This
2 boiler, the box on the left, boiler can be fired
3 with fossil fuels such as coal, natural gas, oil,
4 biowaste, wood. It can also be replaced by a
5 nuclear reactor.

6 Air and water are introduced and a fuel.
7 The heat creates steam, which turns the steam
8 turbine generator, which turns, in turn, an
9 electric generator and creates electricity.

10 The steam, the spent steam that comes
11 out of that turbine must be cooled in order to
12 allow the water, the steam and water, to be
13 recycled and reused, and also to improve the
14 efficiency and the power output of the power
15 plants.

16 The more effectively this condenser is
17 cooled, whether by evaporative cooling, air
18 cooling, once-through ocean water cooling, the
19 more effectively the condenser is cooled, the more
20 power the plant makes, and the more efficiently it
21 uses its fuel.

22 Next slide, please. Today, many of the
23 power plants built in California are combined
24 cycle plants, where we've combined a gas turbine
25 with a steam turbine. And in these plants the

1 steam turbine cycle is practically identical to
2 the Rankine cycle that we just looked at. There's
3 a condenser which must be cooled in order for the
4 steam turbine to perform optimally.

5 Many of today's power plants are similar
6 to Starwood, just simple cycle plants where we
7 have just a gas turbine providing the power. In
8 one of these plants the air is taken into a
9 compressor and compressed. Then the compressed
10 air has fuel added to it and it burns. It is now
11 a hot mixture, passes through the turbine section.

12 The turbine does two things. First, it
13 drives the compressor, and then it turns the
14 electric generator.

15 The power put out by the turbine is a
16 factor of the mass flow of air through the
17 machine. So, in warm climates such as California,
18 you can increase the mass flow through the machine
19 allowing it to produce more power by cooling the
20 air as it enters the machine.

21 In fact, not only does this allow a
22 greater power output, but increases the fuel
23 efficiency of the machine, because the cooler the
24 air is going through the compressor the less power
25 it takes to compress it. That leaves more power

1 left over to turn the generator.

2 Actually three commonly used modes of
3 cooling inlet air to a gas turbine. Two of the
4 four are mechanical chillers and adsorption
5 chillers. We see mechanical chillers being
6 installed in California power plants that cools
7 the air before it goes in something similar to a
8 refrigerator.

9 Then there's another popular method
10 called evaporative cooling. This is inlet air
11 cooling. And it amounts to evaporating water into
12 the air before it reaches the compressor of the
13 gas turbine. A very popular technology. One of
14 the drawbacks is that you have blowdown water that
15 has to be disposed of as wastewater.

16 Then recently gas turbines manufacturers
17 have gained enough confidence in their machines
18 that they've allowed what we now call fogging.
19 This is, again, inlet air cooling. But instead of
20 requiring that the air be fully -- the water be
21 fully evaporated into the air before it reaches
22 the compressor in the gas turbine, in fact the
23 device is designed such that a fog or mist of
24 water is sprayed right into the inlet of the
25 compressor.

1 And these tiny water droplets, it's been
2 found, you know, don't damage the compressor, the
3 first blades of the compressor, the first stage
4 blades. And so the manufacturer of the turbine
5 will allow this without it impacting the warranty.
6 Fogging is effective as evaporative air cooling,
7 inlet air cooling, because, again, you're cooling
8 the air as it enters the turbine; you're
9 increasing the mass flow rate.

10 And the advantage is that you don't have
11 the blowdown wastewater to deal with that you do
12 with the evaporative inlet air cooling process.
13 So fogging is popular because it gives all the
14 benefit of evaporative inlet air cooling with less
15 of the cost, less of the hassle of maintaining a
16 process.

17 Now, cooling, in both the steam plant
18 and the gas turbine plant, again accomplishes the
19 same two purposes. It increases the power output
20 of the power plant, and it increases the fuel
21 efficiency of the power plant.

22 And in both cases the cooling is used to
23 cool what we call the working fluid. These are
24 thermodynamic machines. They make power by moving
25 heat through the machine. Thermodynamic means

1 heat movement.

2 And that heat is carried through the
3 machine with a working fluid. In the case of a
4 steam plant, the working fluid is water or steam.
5 In the case of the gas turbine that working fluid
6 is air. In both cases, when you cool the working
7 fluid you improve both the power output and
8 efficiency of the machine.

9 Inlet air cooling, whether evaporative
10 or fogging, does the same thing as condenser
11 cooling in a steam plant. It cools the working
12 fluid improving the power output and efficiency of
13 the power plant.

14 MR. BABULA: Okay. Through your
15 personal contacts, conferences, seminars, do you
16 regularly interact with engineers involved in
17 power generation outside of this Commission?

18 MR. BAKER: Yes, I do.

19 MR. BABULA: On the topic of inlet
20 fogging, are you aware of any consensus by power
21 generation engineers as to whether inlet fogging
22 is a form of cooling?

23 MR. BAKER: Until a few weeks ago on
24 this Starwood case I had never heard anyone
25 mention the possibility of inlet air cooling, in

1 whatever form, fogging or otherwise, would be
2 anything but power plant cooling.

3 MR. BABULA: Does the definition of
4 steam electric power generating facilities, as
5 found in 7558, and excerpted in the applicant's
6 reply brief, have any bearing as to whether inlet
7 fogging is considered cooling?

8 MR. BAKER: It doesn't address it at
9 all. The policy addresses only the steam plants
10 that were popular back when the policy was formed.
11 It doesn't address the gas turbine plants that are
12 popular today.

13 MR. BABULA: Okay. Is inlet fogging
14 cooling under state law water policy 7558?

15 MR. BAKER: In my opinion it is; and I
16 think the applicant's opinion it is, too. If you
17 look at the application for certification, page 3-
18 4, the section called facility description, and
19 the last line, I'll quote: Inlet fogging will be
20 utilized to provide cooling of inlet air." It's
21 clear, fogging is inlet air cooling. It's cooling
22 the power plant.

23 MR. BABULA: I have no further
24 questions. Cross?

25 MR. THOMPSON: No questions. We do have

1 a couple issues on rebuttal.

2 HEARING OFFICER SHEAN: I have a couple
3 questions. Your testimony lists, under modern
4 power plant cooling takes more forms, steam
5 condenser cooling, which is the steam cycle
6 cooling that is the traditional cooling that was
7 addressed initially in resolution 7558, is that
8 correct?

9 MR. BAKER: I believe I mentioned three
10 popular means of cooling the condenser there.
11 Once-through ocean water cooling; their
12 evaporative cooling; and air cooling.

13 HEARING OFFICER SHEAN: All right. And
14 then you indicate gas turbine inlet air cooling,
15 which is what we're discussing here today. Gas
16 turbine compressor intercooling, which would be
17 the technology found on the GE LMS100, is that
18 what you're referring to there?

19 MR. BAKER: I've not referred to
20 intercooling at all today. I don't -- as I
21 understand it, the machines, Starwood machines,
22 are not intercooled and I have not --

23 HEARING OFFICER SHEAN: I'm just trying
24 to --

25 MR. BAKER: -- addressed intercooling.

1 HEARING OFFICER SHEAN: Your attorney
2 has asked that we admit into evidence your written
3 testimony. And your written testimony has a list
4 of four items that are modern power plant cooling
5 typically take four forms.

6 MR. BAKER: You're talking about item
7 number 3 on the second page?

8 HEARING OFFICER SHEAN: Correct.

9 MR. BAKER: I apologize. I have not
10 orally addressed that today. You're right, it was
11 addressed in our written testimony. I have not
12 addressed it today because, as it says here in the
13 written testimony, this does not apply to the
14 Starwood project.

15 Now, I could --

16 HEARING OFFICER SHEAN: No, I'm not
17 asking you to do it. I'm taking your testimony,
18 I'm trying to understand. You've described four
19 types of modern power plant cooling, right? And
20 this list is one through four.

21 MR. BAKER: No, I think I've confused
22 you, sir, I apologize for that. I've talked about
23 inlet air cooling, gas turbine inlet air cooling.
24 I've talked about steam condenser cooling. I've
25 not talked about the four items that are on page 2

1 of the written testimony.

2 If you'd --

3 HEARING OFFICER SHEAN: Well, I guess I
4 should indicate, or maybe your counsel can tell
5 you, that if you introduce this into evidence it's
6 as if you spoke it here today. Okay?

7 So, when I say your testimony speaks of
8 these four, it's because we're allowing this
9 document in, all right.

10 Now, let me just ask you, of the two
11 principal water uses of this facility, one of them
12 is for fogging and the other is for what?

13 MR. BAKER: It's for NOx control. Water
14 is injected directly into the combustion chamber.

15 HEARING OFFICER SHEAN: And what is the
16 effect on the working fluid of that water
17 injection?

18 MR. BAKER: In actuality the water
19 injected into the combustion chamber accomplishes
20 the same ends as cooling the air going into the
21 inlet of the turbine. It cools the mass flow
22 through the combustor. It also adds mass flow
23 through the turbine, which increases the power
24 output. And since the power to inject that water
25 is very much less than would have been the power

1 to compress it, if it were inlet air, it increases
2 the fuel efficiency of the machine.

3 However, we do not and have not
4 maintained that combustor water injection is for
5 the purpose of cooling the power plant because its
6 principal purpose is for NOx control.

7 Let me summarize. Yes, it does cool the
8 power plant. It provides the same benefits of
9 more power, more efficiency. But, we don't call
10 that combustor water injection power plant cooling
11 because that's not its primary purpose. The
12 primary purpose is just for NOx control.

13 HEARING OFFICER SHEAN: And how is the
14 NOx controlled?

15 MR. BAKER: Nox is created when the
16 flame temperature reaches -- goes too high.
17 Nitrogen makes up nearly 80 percent of air. And
18 it's, under normal conditions, rather inert. But
19 if you have a high enough flame temperature that
20 some of the NOx is actually burned or combined
21 with oxygen, this produces various different
22 oxides of nitrogen, which are regarded as
23 precursors to smog.

24 If you cool the flame temperature, if
25 you cause the fuel to burn at a lower temperature,

1 less NOx is combined with oxygen. And so the
2 oxides of nitrogen production is much lower.

3 The water injected into the combustor,
4 itself, cools the flame temperature. Natural gas
5 will burn in air at over 3000 degrees Fahrenheit.
6 But, in fact, with cooling and air dilution and
7 such, the flame temperatures are kept down not
8 much above 2000 degrees, 2300 degrees or so. This
9 reduces NOx production.

10 HEARING OFFICER SHEAN: Are there
11 alternatives to water injection for NOx control in
12 standard combustion turbines that are available
13 for the power market?

14 MR. BAKER: Many of them allow steam
15 injection into the combustor. In this case, you
16 know, you need a source of steam which is not
17 common in a simple cycle power plant like
18 Starwood.

19 HEARING OFFICER SHEAN: Are there dry
20 low NOx combustor cans?

21 MR. BAKER: Yes. Those are popular on
22 the larger frame machines, industrial gas
23 turbines, that have separate cylindrical
24 combustors arrayed around the machine. The
25 aeroderivative machines, the ones that are derived

1 from aircraft jet engines similar to the Starwood
2 engines, typically do not offer dry low NOx
3 combustors because the combustors in these
4 machines are an annular or donut shape. And they
5 don't usually lend themselves to a dry low NOx
6 technology.

7 HEARING OFFICER SHEAN: What's the
8 proportion of water for this project between NOx
9 control -- water injection for NOx control versus
10 water fogging of inlet air?

11 MR. BAKER: I'm sorry, I don't know
12 that.

13 HEARING OFFICER SHEAN: All right.
14 We'll go to Mr. Anderson. Do you know that?

15 MR. ANDERSON: Yeah, it's about a third,
16 two-thirds for NOx and one-third for inlet
17 fogging.

18 HEARING OFFICER SHEAN: So the greater
19 use is for NOx control?

20 MR. ANDERSON: Yes.

21 HEARING OFFICER SHEAN: From a water
22 resources perspective, if the greater fraction of
23 water is used for NOx control, why then would the
24 staff not take the position, since that water is
25 used to cool the flame of the combustor cans, that

1 water used for NOx injection is subject to the
2 same policy that would apply to inlet air cooling?

3 MR. ANDERSON: Well, we consider this
4 two ways. One is we believe that inlet fogging is
5 evaporative cooling. And although NOx, in a
6 sense, is evaporative cooling, it has to be done.

7 So when we looked at the use of one type
8 of water for this, the backwash water, it's very
9 high quality, we're looking at, one, an option for
10 cooling water, as under state policy 7558 and IEPR
11 2003, for example.

12 But at the same token, we're looking for
13 conservation of water and using the lowest quality
14 water that's available. There is other water
15 available that can take care of both those needs,
16 NOx and inlet fogging. And that's the upper
17 aquifer, the semi-confined aquifer, which is
18 considered brackish water. Which was the first
19 water source proposed by the applicant, their
20 preferred source.

21 They came back with one of their
22 alternatives on October 19th, which was the
23 backwash water.

24 And so from a conservation standpoint we
25 think all of the water is important, and other

1 source lower quality water, or compensation or
2 offsetting the use of the backwash water is
3 important, not just for inlet fogging water, but
4 for the NOx water, also.

5 HEARING OFFICER SHEAN: Okay. I'm again
6 trying to understand why the staff believes that
7 whatever policy applies to inlet cooling water
8 does not apply to the water injection for NOx
9 control.

10 MR. BAKER: Mr. Anderson is speaking to
11 water availability and conservation. I'm speaking
12 strictly technically to gas turbines.

13 And, you know, as I explained, one could
14 make an argument that NOx control water is, in
15 fact, power plant cooling water. But I don't
16 choose to make that argument. I don't really like
17 that argument. And I would not claim that NOx
18 control water is power plant cooling water.

19 HEARING OFFICER SHEAN: Okay. If we
20 were to consider the working fluid, then, you have
21 the inlet air arriving at some temperature before
22 it gets into the inlet structure. It is then
23 cooled by virtue of the fogging; enters the low-
24 pressure compressor, the high-pressure compressor,
25 the combustion cans at which point, as the flame

1 is being put to it, this working fluid is further
2 cooled as it's combusted.

3 It then goes through the high-pressure
4 and then the low-pressure turbines as it exits the
5 machines. And now, am I correct that the exhaust
6 coming from the turbine will contain, as water
7 vapor, whatever was the injected water?

8 MR. BAKER: That's correct.

9 HEARING OFFICER SHEAN: Okay. And, in
10 fact, as far as the atmosphere is concerned, the
11 water that will exit the stack of the combustion
12 turbine, assuming it's been fogged and used water
13 for NOx control, the atmosphere cannot tell the
14 difference between the water vapor that's exiting
15 that stack and the water vapor that would be
16 produced by the evaporation of that water had it
17 been left in the Baker pond?

18 MR. BAKER: That's correct.

19 HEARING OFFICER SHEAN: Okay. Is the
20 project waste heat cooled in any way?

21 MR. BAKER: Not that I'm aware of. It
22 passes through a selective catalytic reduction
23 unit and, I believe, a carbon monoxide catalyst.
24 And it will be somewhat cooled in that process.
25 But it's not for the purpose of cooling it.

1 HEARING OFFICER SHEAN: All right. Just
2 two more questions here then. Mr. Anderson, based
3 upon what you understand to be the average
4 capacity factor for this project, which I think
5 has been stated in the FSA as 400 hours, do you
6 have an estimate of the average number of acrefeet
7 that would be used for this inlet fogging?

8 MR. ANDERSON: I think what the
9 applicant has in their AFC is that approximately
10 at 400 hours of operation they would use 14
11 acrefeet approximately of water for all purposes.
12 Which a third of that would be inlet fogging.

13 So, we're talking four or five acrefeet
14 of water for inlet fogging at 400 hours of
15 operation.

16 HEARING OFFICER SHEAN: Okay. And, Mr.
17 Baker, you gave a good rendition of the history of
18 some of the -- did you want to make a comment?

19 MR. BAKER: No, sir.

20 HEARING OFFICER SHEAN: Okay. -- of
21 some of the history of power plants around the
22 time that the Water Board's policy was adopted.
23 As a general rule for those nuclear and other
24 fossil-fuel-fired facilities, what was their
25 annual water use in terms of acrefeet?

1 MR. BAKER: Oh, up in the thousands.

2 HEARING OFFICER SHEAN: Would it have
3 been tens of thousands?

4 MR. BAKER: Oh, no, you'd -- actually I
5 think that might be possible. I'm not familiar
6 with the numbers, but, yes, you could probably get
7 up in that area.

8 MR. ANDERSON: It would have to be a
9 very large power plant, on the order of one to
10 several thousand, such as a nuclear plant, for
11 that. Unless they're using once-through cooling,
12 then it would be hundreds of thousands.

13 HEARING OFFICER SHEAN: So at the time
14 of the origin of the policy, I guess I want to
15 understand, if that was adopted in 1975, the
16 Commission had, within the remainder of the '70s,
17 the Sun Desert project in 1976, which was an SDG&E
18 nuclear project, the PG&E Stanislaus project, PG&E
19 fossil 1 and 2 project, and the SCE CalCoal
20 project. Do you have in mind any of the proposed
21 water uses for those facilities?

22 MR. ANDERSON: I remember them. I'd
23 just gotten here. But, I don't remember. I'd say
24 if you have a 500 megawatt power plant you're
25 looking at somewhere between 4000 and 6000 or 7000

1 acrefeet of water a year.

2 HEARING OFFICER SHEAN: Okay.

3 MR. ANDERSON: -- combined cycle but
4 there's steam is --

5 MR. BAKER: Well, but only a third of
6 the power comes from the steam cycle.

7 MR. ANDERSON: Yeah.

8 HEARING OFFICER SHEAN: All right, I
9 have no further questions. Do you have any
10 redirect?

11 MR. BABULA: Yes. Let me finish on --
12 okay. Got interrupted there.

13 REDIRECT EXAMINATION

14 BY MR. BABULA:

15 Q Mr. Anderson, a couple questions for you
16 to kind of tighten up the testimony a little bit.
17 Looks like you've talked about some of the things
18 already.

19 Let's see. Can the upper aquifer, the
20 source the applicant originally proposed to use,
21 be used for irrigation?

22 MR. ANDERSON: No.

23 MR. BABULA: Okay. How about the
24 backwash water that they now propose to use, does
25 that have any irrigation use for agriculture?

1 MR. ANDERSON: That has use for
2 everything.

3 MR. BABULA: Okay. Can you explain
4 regarding state water policy 7558 where backwash
5 water would fall in the list of preferred water
6 sources?

7 MR. ANDERSON: Yes. You're probably
8 aware of these categories, but the State Water
9 Resources Control Board policy 7558 sets forth a
10 priority. And there are five priorities listed.

11 The first is the most desirable water to
12 use because it's wastewater being discharged to
13 the ocean. Ocean water, brackish water from
14 natural sources or irrigation return flow, inland
15 wastewaters of low TDS and other inland waters.

16 So, in this case, priority one,
17 wastewater being discharged to the ocean does not
18 apply. Priority two, ocean water, does not apply.
19 Priority three, brackish water from natural
20 sources is the upper aquifer, which was the first
21 source of water that the staff has recommended.
22 And that category three, brackish water from
23 natural sources, or irrigation return flow.

24 We don't consider this irrigation return
25 flow. The irrigation return flow is water that

1 has been used for irrigation and comes off a field
2 laden with minerals and salts. And then is
3 returned. And sometimes it can be reused, often
4 it can't.

5 The fourth category, inland wastewaters
6 of low TDS, sounds good if we continue to call
7 backwash water wastewater. Backwash water is 20
8 times cleaner than the upper aquifer water, for
9 example. It's 170, a TDS of 170, which is cleaner
10 than most of the drinking water in Sacramento.

11 It can be called wastewater, but I think
12 that next year it might be called irrigation water
13 again, or some other water that has great
14 potential to be used for a variety of sources.
15 And the fact that 160 acrefeet of it would be
16 wasted seems to be very wasteful.

17 Number five, other inland waters. It
18 fits into that easily because of the quality of
19 the water.

20 MR. BABULA: Okay. During your research
21 and working with this project, did you have an
22 opportunity to look into the Westland Conservation
23 Program?

24 MR. ANDERSON: Yes, I have.

25 MR. BABULA: Can you explain what the

1 program's about and how it works?

2 MR. ANDERSON: Well, their program is
3 called the expanded irrigation system improvement
4 program. And it's a program to help farmers
5 upgrade and modernize their irrigation equipment
6 so that they are more efficient and use less
7 water, conserve water.

8 Westlands Water District has a large
9 amount of money in a pot, about \$10 million. And
10 it's cycled through in four years. So each year
11 there's \$2,500,000 available.

12 The majority, about 90 percent, of the
13 improvements that are made are movements towards
14 what's called micro-drip irrigation. And micro-
15 drip irrigation, the water needs to be fairly
16 clean in terms of suspended solids, so that the
17 water can go through a small hole. Kind of like a
18 soaker.

19 Anyhow, Westlands provides loans to the
20 farming community. They buy and upgrade their
21 equipment, thereby conserving Central Valley
22 Project water, which is delta water.

23 And we assume about an eight-year life
24 of these upgrades before they have to be re-
25 upgraded. The money that is provided works over

1 and over, so that \$2.5 million on a four-year --
2 every four years, that \$10 million is available
3 again.

4 So, if you conserve 5000 acrefeet of
5 water with that \$10 million, that's for the first
6 four years. The second four years, the first four
7 year of equipment is still operational, and so
8 then it doubles. In this case it would double,
9 say, to 10 acrefeet. And then it would continue
10 at that level each year until the program stopped,
11 if ever.

12 Looking at that we've used an estimate
13 of approximately a third of an acre of water can
14 be conserved per acre per year. And in order to
15 create an average of 136 acrefeet, which is the
16 amount of water that the applicant would use if it
17 operated full time, 4000 hours a year, would end
18 up requiring about \$175,000. That's a one-time
19 payment, and then it just keeps working.

20 So it seems like a very good program.
21 And we've been involved with it and recommended it
22 also for the Panoche project.

23 MR. BABULA: Can you elaborate on the
24 basis for establishing a conservation program that
25 saves an amount of water equivalent to the maximum

1 amount used by the project rather than the
2 expected use?

3 MR. ANDERSON: Well, I think that it's
4 been, you know, staff normally recommends the
5 amount of water that's needed at the maximum. The
6 maximum use of this project would be 136 acrefeet.
7 Even though the applicant claims they would only
8 use -- they'd only operate 400 hours a week, staff
9 would be willing to create a condition of
10 certification that allowed them only 14 acrefeet a
11 year.

12 But it seems to me that they would like
13 to be licensed for the maximum amount, which is
14 136 acrefeet of water, in case something happens
15 and you're fortunate enough to operate 4000 hours.

16 HEARING OFFICER SHEAN: No further
17 questions. Cross?

18 HEARING OFFICER SHEAN: Any recross?

19 MR. THOMPSON: Just a couple, Mr.
20 Anderson.

21 RE CROSS-EXAMINATION

22 BY MR. THOMPSON:

23 Q Am I correct that you're saying because
24 at some point in the future the project could
25 operate 4000 hours a year you're assuming that the

1 project would operate 4000 hours per year for
2 every year in your calculation?

3 MR. ANDERSON: I used the calculations
4 that would allow for what you're being licensed
5 for, or what I'm assuming you'll be licensed for,
6 136 acrefeet a year.

7 MR. THOMPSON: And you recognize that
8 staff also in the FSA stated that the average
9 would be 14 acrefeet a year?

10 MR. ANDERSON: I recognize that we used
11 that figure that you provided us. If you --

12 MR. THOMPSON: Do yo have any --

13 MR. ANDERSON: -- if you operated at 400
14 hours.

15 MR. THOMPSON: Do you have any reason to
16 think that the 14 acrefeet a year is unreasonable
17 as an average?

18 MR. ANDERSON: Well, only that you're
19 being licensed for 4000 hours of operation. At
20 least that's, according to air quality that's the
21 amount.

22 MR. THOMPSON: One more brief item. You
23 went to principle number one of policy 7558 and
24 went down the latter of needs -- of water sources?
25 Do you have that?

1 MR. ANDERSON: I will in a second. Yes.

2 MR. THOMPSON: Is there a definition for
3 irrigation return flow in 7558?

4 MR. ANDERSON: No.

5 MR. THOMPSON: Is there a definition of
6 power plant?

7 MR. ANDERSON: I think there's one that
8 same steam electric power generating facilities,
9 is that the one you mean?

10 MR. THOMPSON: Yeah. And -- well, I
11 think that's it.

12 No further questions of Mr. Anderson on
13 this document. As I said, we have a couple
14 questions on rebuttal when the time is
15 appropriate.

16 HEARING OFFICER SHEAN: Since Mr.
17 Anderson's testimony here got into the other
18 indicated supplemental testimony of Mr. Anderson
19 and Somer Goulet, right?

20 MR. BABULA: Right.

21 HEARING OFFICER SHEAN: Do you have
22 objection to the admission of that testimony?

23 MR. THOMPSON: I do not have an
24 objection to the description of the Westlands
25 program. I do object to the discussion of the

1 Baggett letter.

2 HEARING OFFICER SHEAN: All right. With
3 that stricken, it's admitted. Since that's
4 similar to what we did in your prior testimony.

5 All right. Does that conclude the
6 staff's witnesses?

7 MR. BABULA: It does.

8 HEARING OFFICER SHEAN: All right, thank
9 you. And do you have some rebuttal?

10 MR. THOMPSON: Yes.

11 DIRECT EXAMINATION

12 BY MR. THOMPSON:

13 Q First, Mr. Weiss, would you confirm -- I
14 think staff used a figure of approximately 70
15 percent of 14 acrefeet average annual use would be
16 used for emission control -- could you confirm or
17 give a more precise number if you have one?

18 MR. WEISS: Yes. The amount of water
19 use for emission control is 70 percent of the
20 volume; and 30 percent is used for inlet fogging.
21 The exact data is in the AFC.

22 MR. THOMPSON: I would like to have Mr.
23 Ron Watkins sworn.

24 //

25 //

1 weeks after the New York blackout in 1965 simple
2 cycle gas turbines became rather popular, and
3 there were numerous orders for simple cycle gas
4 turbines. And the reason was they found that all
5 the large steam plants, when the whole system went
6 black, they did not have black-start capability,
7 many of them.

8 And so there was a rush to install a
9 number of simple cycle gas turbines, and a number
10 in California in the late '60s, a predecessor to
11 the Frame 7, the Frame 5 and some Pratt and
12 Whitney aeroderivative gas turbines were installed
13 in those days.

14 So there definitely were a number of gas
15 turbines in operation by 1975. Now, none of those
16 gas turbines used any -- those simple cycle units
17 in those days -- used any water. Because it was
18 not economical to install evaporative cooling, and
19 fogging wasn't yet really developed for simple
20 cycle gas turbines. And water injection for NOx
21 control was not yet applicable on gas turbines.
22 And that didn't evolve until a number of years
23 later.

24 But certainly there were a number of gas
25 turbines in operation in 1975. I was very active

1 in, in fact, this Commission and a number of
2 energy policy issues that were developed in this
3 state in 1975, including 7558. 7558 was developed
4 really when a number of steam plants, including
5 the Sun Desert Nuclear Plant, which some of you
6 are familiar with, was proposed by San Diego Gas
7 and Electric in the area of Blythe, California,
8 and used agricultural wastewater for that plant,
9 was the proposed use. So that it would not be
10 dumped back into the Colorado River in the Blythe
11 area.

12 And much of 7558 was really developed in
13 response to those steam plants. And was
14 specifically aimed at the steam plants because of
15 the large volume of water that was being used.

16 There was another nuclear plant called
17 the San Joaquin Plant that was proposed at about
18 the same time that I think was going to use Kern
19 River water. So it was certainly discouraging the
20 steam plants from using fresh water.

21 And that's why the definition in 7558
22 was specifically constructed to only include steam
23 plants.

24 MR. THOMPSON: That concludes our
25 rebuttal.

1 HEARING OFFICER SHEAN: Before your
2 witness leaves, is the type of combustion, simple
3 cycle combustion turbine that you're talking
4 about, similar to the one that has been at
5 Edison's Huntington Beach facility? Is that --

6 MR. WATKINS: Yeah, there were a number
7 of steam plants that had peaking plants attached
8 to them. As I said, primarily because of black-
9 start capability. And to provide that for the
10 steam plants.

11 HEARING OFFICER SHEAN: Thank you. Do
12 you have any questions of the witness?

13 MR. BABULA: I have a question for you.

14 CROSS-EXAMINATION

15 BY MR. BABULA:

16 Q So your testimony is that there were
17 these simple cycle plants prior to '75, but they
18 weren't using water for NOx control or fogging?

19 MR. WATKINS: That's correct.

20 MR. BABULA: Okay. No further
21 questions.

22 HEARING OFFICER SHEAN: All right.
23 Anything further?

24 MR. THOMPSON: I have a question on the
25 testimony of Mr. Anderson and Ms. Goulet's. Is

1 now the --

2 MR. BABULA: You want to ask Mr. --

3 MR. THOMPSON: I only have one question.

4 MR. BABULA: Go ahead.

5 FURTHER RECROSS-EXAMINATION

6 BY MR. THOMPSON:

7 Q Mr. Anderson, you talked about the
8 potential of using the water in Mr. Baker's pond.
9 What happens to that water right now, to the best
10 of your knowledge?

11 MR. ANDERSON: According to you folks,
12 it is being evaporated and percolated right now
13 through a number of small, and one large pond.
14 Those ponds are now being connected by pipes. For
15 what reason would that be, I wonder?

16 MR. THOMPSON: To supply water to this
17 plant?

18 MR. ANDERSON: Is that why? But, you
19 said that -- when we asked that question you said
20 that no, this was happening anyhow. The only
21 thing related to this plant would be the pipeline
22 from the large pond to the power plant.

23 MR. THOMPSON: Let me ask my witness
24 when the time comes so the record is straight on
25 this.

1 If you pull water out of the aquifer, is
2 it there for future use?

3 MR. ANDERSON: Does it have a future
4 use?

5 MR. THOMPSON: When you pull water out
6 of the aquifer, does it remain in the aquifer so
7 it could be used later?

8 MR. ANDERSON: Well, it's very
9 complicated. One molecule of water doesn't --
10 isn't purchased by Westland and goes directly to
11 Westland. Water can be moved all around in the
12 aquifer.

13 But normally once the water leaves the
14 aquifer, it goes -- in this case it goes to
15 Westlands Water District. Westlands has a right
16 to a certain amount of water, and they have
17 people, groups such as Baker Farms, that buys that
18 water from them. And so there are a number of
19 contracts involved.

20 Currently Westlands Water District has a
21 moratorium on using that water for industrial
22 purposes. It only can be used for agriculture
23 right now. That probably is why the Westlands
24 Water District Board meeting is trying to make a
25 determination as to whether they are going to

1 allow the sale of this water.

2 MR. THOMPSON: I must not have been
3 clear. Let me try again. If you have one system
4 that pulls water from a pond that would ordinarily
5 evaporate or percolate compared to another system
6 that pulls water out of the aquifer, thus
7 depriving the aquifer of that water year in and
8 year out, I guess I'm having trouble with your
9 recommendation that we use the aquifer water that
10 is pulled out and not replaced versus the water
11 that would evaporate and percolate. Can you
12 enlighten me?

13 MR. ANDERSON: Well, the water that's
14 evaporating and percolating is very high quality.
15 It's percolating into a very low quality aquifer
16 and therefore becomes degraded.

17 Now you're proposing to use that water.
18 There's no reason that Baker Farm couldn't use
19 that water, re-use it. All they have to do is run
20 it through a filter just like you will.

21 And so my belief is that water
22 eventually, since it's delta water, and it's in
23 short supply and it's getting in shorter supply,
24 will be used at some point, maybe next year, maybe
25 three years from now, for irrigation. It's going

1 to be recycled by Baker Farm. They're just not
2 going to continue to waste 160 acrefeet a year.
3 It wouldn't make any sense.

4 MR. THOMPSON: I don't have any more
5 questions. I think I've -- this whole thing up;
6 and what I'd like to do is ask a question of Mr.
7 Weiss to see if I can get my point across that
8 way.

9 HEARING OFFICER SHEAN: Well, stand by
10 here. When you say in one to three years you
11 think this water would no longer be available to
12 the project but would be recycled by Baker Farms
13 for irrigation use, what is that number opinion
14 based upon?

15 MR. ANDERSON: Well, I don't know what I
16 can -- I had a phone conversation with an employee
17 at Baker's Farm, but I don't know if that's
18 admissible.

19 HEARING OFFICER SHEAN: Well, if it was
20 part of formulating your opinion, why don't you go
21 ahead and state it.

22 MR. ANDERSON: I asked --

23 HEARING OFFICER SHEAN: And if there's
24 an objection we'll deal with it.

25 MR. ANDERSON: I called to talk to Barry

1 Baker, who is the owner, I think, and he was not
2 there. And they transferred me to another
3 gentleman named Juan Calderon.

4 And I talked to him about how they're
5 operating; what they're doing with their water
6 right now. And they are evaporating it, you know.

7 But that -- I said if the power plant
8 wouldn't be buying this water now, when they start
9 using it in a year or two, what would you do with
10 that water? Would you continue to waste it? And
11 he said, no, we would recycle it.

12 And it's as simple as running it through
13 a filter just like the applicant is doing, or
14 proposing to do, for the ag community to run that
15 back through a filter. All it has in it is leaves
16 and debris that gets filtered out. It's very
17 clean water. The water gets pumped backwards to
18 clean off the front of the filter, and then that
19 water is sent -- given a little time for the
20 solids to sink, you know, go out of suspension.
21 That water then could be just run right back
22 through the filter and be used for irrigation.

23 HEARING OFFICER SHEAN: So what you
24 would envision is sort of this cascading filtering
25 process. At some point, though, you end up with

1 as much filtered water for irrigation use as
2 possible, is that right?

3 MR. ANDERSON: Well, I'm not sure I --

4 HEARING OFFICER SHEAN: You have the
5 filtration that's currently taking place at Baker
6 Farms. And right now that does not include
7 filtering the water that they put in the
8 evaporation pond to recycle.

9 So, if I understand, you have the
10 current level of filtration. If, for what you're
11 describing to happen, you'd have another level of
12 filtration from what they were currently using as
13 backwash water in the evaporation pond. And so
14 that would be filtered, right?

15 MR. ANDERSON: That's what the applicant
16 proposes to do.

17 HEARING OFFICER SHEAN: And presumably
18 there's some reject water from that filtering
19 process?

20 MR. ANDERSON: Yes.

21 HEARING OFFICER SHEAN: And so that sort
22 of just keeps going until you basically have got
23 as much water extracted from that recycling
24 process as possible, is that the idea?

25 MR. ANDERSON: Yes.

1 HEARING OFFICER SHEAN: All right, I
2 have nothing further.

3 MR. THOMPSON: I have one question of
4 Mr. Weiss on redirect, if I may?

5 HEARING OFFICER SHEAN: Yes.

6 REDIRECT EXAMINATION

7 BY MR. THOMPSON:

8 Q Mr. Weiss, could you please add to the
9 discussion on the Baker ponding source of water?

10 MR. WEISS: Yes. Just to point out that
11 in Mr. Baker's letter, and to my knowledge from
12 his attorney, that he already uses the microdrip
13 system, which is a way to reduce his water
14 consumption. He's already done that.

15 Also, to his letter, and what he's told
16 me, is that he wouldn't be doing this without some
17 impetus; he wouldn't be collecting all this water.

18 I think really the question, you know,
19 that the staff is not addressing is currently all
20 of these filters are dumping water on the ground.
21 And a lot of the farmers are dumping water on the
22 ground.

23 The reason they're doing it is because
24 it doesn't pay for them to get it. You know, 160
25 acrefeet may seem like a lot of water, but Barry

1 Baker uses 24,000 acrefeet in his farming
2 operation. So it's not worth his time to go get
3 it at this point in time.

4 And without our project being there he
5 wouldn't go get it. It creates an impetus; it
6 creates -- we provide some funds for him to go do
7 this, and put the piping in and collect the water.

8 If you look at the Westlands Water
9 District, you know, fund, it's actually there to
10 do these kinds of things, to go and collect this
11 water so it's not wasted.

12 So, in a sense, our project and what
13 we're doing with Mr. Baker is directly in line
14 with conservation. We're trying to get the
15 benefit of it, though. We're paying for the
16 piping and we're trying to, you know, we want to
17 use that water.

18 So, I find it ironic that mitigation
19 should be suggested when, in fact, this is a
20 mitigation process. And if we do this, you know,
21 will others pick up on it. And, you know, will
22 other projects come along and save some water, put
23 it to better use.

24 MR. THOMPSON: Thank you, that's all.

25 HEARING OFFICER SHEAN: Do you have any

1 cross on that?

2 MR. BABULA: No, no, thanks.

3 HEARING OFFICER SHEAN: All right. Are
4 you done? All right. I think we'll excuse the
5 witnesses. Thank you. Appreciate it.

6 All right, are we through on water
7 resources?

8 MR. THOMPSON: Staff has, as part of its
9 testimony, three suggested conditions of
10 certification and the verifications thereto.

11 We have no objection to 4. Condition of
12 certification number 8 was actually okay until we
13 heard from Westlands that they are contemplating
14 what to do. So we would like a slight alteration
15 in 8 to allow for the fact that we may not hear
16 from Westlands.

17 And 9 we object to.

18 HEARING OFFICER SHEAN: I'm sorry, I'm
19 going to ask you to go through that again. Four
20 is okay?

21 MR. THOMPSON: Four is okay.

22 HEARING OFFICER SHEAN: Eight is no?

23 MR. THOMPSON: I think the concept of 8
24 is acceptable, and we will try and run down, with
25 Westlands Water District, what the final

1 determination is. However, we are not sure that
2 we will be able to get a letter out of them.

3 And 9 is not okay. We object to 9.

4 HEARING OFFICER SHEAN: All right.

5 MR. THOMPSON: We also would like to
6 sponsor our version -- we have reviewed staff's
7 suggested traffic and transportation 2, 3 and 4,
8 with their suggested edits; and those are
9 acceptable to us.

10 HEARING OFFICER SHEAN: Okay.

11 MR. BABULA: Staff can testify as to --
12 we'd like to comment on the school bus and
13 conditions that he has just talked about.

14 HEARING OFFICER SHEAN: All right.

15 MR. BABULA: Could we have the witness
16 sworn in?

17 HEARING OFFICER SHEAN: He's been
18 previously sworn.

19 MR. ADAMS: I've been previously sworn.

20 MR. BABULA: Okay.

21 HEARING OFFICER SHEAN: I believe.

22 Whereupon,

23 JAMES ADAMS

24 was recalled as a witness herein, and having been
25 previously duly sworn, was examined and testified

1 further as follows:

2 MR. ADAMS: Essentially what we were
3 asked to do, as you know, was to --

4 DIRECT EXAMINATION

5 BY MR. BABULA:

6 Q Would you identify yourself?

7 MR. ADAMS: Yes. My name is James
8 Adams, environmental office. And we were asked to
9 review the additional conditions; and we made some
10 revisions that we thought were helpful to clarify
11 it and removed some of the language that didn't
12 necessarily relate to the school bus issue, in
13 condition Trans-2, which is why you see quite a
14 few revisions.

15 And then in Trans-3 and 4, relatively
16 minor with the exception of adding a verification
17 at the end of Trans-3.

18 So hopefully this would give -- we think
19 this helped clarify the intent and what was
20 discussed at the previous, when we had the
21 previous hearing.

22 HEARING OFFICER SHEAN: All right.

23 Appreciate your effort on that.

24 MR. BABULA: I have a question for you.

25 HEARING OFFICER SHEAN: As well as from

1 the applicant. Yeah, go ahead.

2 MR. BABULA: One question. Did staff
3 find the original condition satisfactory? Was it
4 staff's opinion that changes were needed?

5 MR. ADAMS: Well, yes. I reviewed the
6 Cosumnes case and the circumstances were slightly
7 different, which is why we came up with slightly
8 different conditions. And we felt that the
9 original analysis was okay and the condition was
10 what we required. And we checked with the school
11 board and they agreed with us.

12 But, in the interest of increasing the
13 margin of safety we thought it was good to go
14 ahead and add these additional conditions. And we
15 did put some time in for the revisions, and we
16 think it's appropriate in this case.

17 HEARING OFFICER SHEAN: All right. The
18 Committee thanks you for your time and effort.

19 MR. ADAMS: Okay, thank you.

20 HEARING OFFICER SHEAN: And I must
21 indicate, some of this is based upon the fact that
22 at the site visit we went out and drove the road,
23 as well as stopped at the area where the school
24 bus stop is. So based upon the observation of the
25 site, and the circumstances that we know that are

1 similar to either SMUD or other projects, thought
2 this was the appropriate thing to do. So, thank
3 you to the staff.

4 Is there anything else?

5 MR. THOMPSON: Nothing from applicant.

6 HEARING OFFICER SHEAN: From the staff?

7 MR. BABULA: We would like to have
8 Shahab testify on noise and vibration because
9 there was some confusion during the preliminary
10 hearing regarding distances. And this will help
11 clarify that.

12 HEARING OFFICER SHEAN: Okay. I thought
13 we'd gotten to 3000 feet being fine. Is that
14 right?

15 MR. BABULA: Steve Baker will also be on
16 this panel.

17 Whereupon,

18 SHAHAB KHOSHMAHRAB
19 was called as a witness herein, and after first
20 having been duly sworn, was examined and testified
21 as follows:

22 THE REPORTER: Please state and spell
23 your full name for the record.

24 MR. KHOSHMAHRAB: Shahab Khoshmashrab,
25 S-h-a-h-a-b, last name is K-h-o-s-h-m-a-s-h-r-a-b.

1 Whereupon,

2 STEVE BAKER

3 was recalled as a witness herein, and having been
4 previously duly sworn, was examined and testified
5 further as follows:

6 MR. BABULA: Thank you.

7 DIRECT EXAMINATION

8 BY MR. BABULA:

9 Q Did you prepare the noise and vibration
10 section of the FSA which included your
11 declaration?

12 MR. KHOSHMAHRAB: Yes.

13 MR. BABULA: Okay. Did you prepare a
14 supplemental noise and vibration testimony filed
15 on November 9, and is this testimony true and
16 correct to the best of your knowledge?

17 MR. KHOSHMAHRAB: Yes.

18 MR. BABULA: Do you have any changes to
19 make?

20 MR. KHOSHMAHRAB: No.

21 MR. BABULA: Can you explain the
22 dialogue which occurred during the preliminary
23 hearing between you and the Hearing Officer which
24 led to changes in staff's condition of
25 certification?

1 MR. KHOSHMAHRAB: The Hearing Officer
2 asked Mr. Baker and me if the project would be in
3 compliance with the applicable LORS at monitoring
4 location ML-3, which is 1300 feet away from the
5 project site then, shouldn't also a plot comply
6 with the limit if the tenants in ML-1 were to be
7 relocated to about the same distance.

8 And our initial response was that yes,
9 it would make sense. But after leaving the
10 hearing I made some calculations using basically
11 mathematical extrapolation, and using the 55 dba
12 limit or predicted noise level from the project
13 given in the AFC, to make sure of this.

14 And my calculations showed that actually
15 to comply with the 45 db limit, decibel limit, we
16 would need a minimum of 2640 feet, actually a half
17 a mile, which is 2640.

18 And therefore in order to also make --
19 now, this limit that we're talking about here was
20 originally one mile, and it refers to the
21 monitoring location or the measurement that would
22 be required by Noise-5 to be made at the new
23 location. If the project were moved out to one
24 mile, and the original Noise-5, to one mile within
25 the project, then we would have required the noise

1 monitoring.

2 But now we agreed in the hearing to go
3 to 1300 or 1520, which is a quarter of a mile.

4 Now, this number I recommended to be
5 changed to 3000 because it would be taking into
6 account the 2640 plus just a few hundred feet away
7 just to make sure that we're taking into account
8 other factors such as weather conditions, for
9 example; or any possibility of absence of any
10 intervening objects. Or to also account for the
11 possibility that the new location might not have
12 the same ambient noise level as another one, as
13 it's located.

14 MR. BABULA: Those are all my questions,
15 thank you.

16 HEARING OFFICER SHEAN: Okay. No, I
17 understand it. I think this -- I mean, we're
18 doing the right thing; we've got the right result.
19 And thank you --

20 MR. KHOSHMAHRAB: We're just being more
21 conservative just to make sure that --

22 HEARING OFFICER SHEAN: Right. It's a
23 little less than what it was before, and I think
24 it makes sense. So, thank you.

25 MR. BABULA: Thank you.

1 HEARING OFFICER SHEAN: Anything further
2 from the staff?

3 (Pause.)

4 MR. BABULA: We just have one more,
5 Keith Golden, for air quality.
6 Whereupon,

7 KEITH GOLDEN
8 was called as a witness herein, and after first
9 having been duly sworn, was examined and testified
10 as follows:

11 THE REPORTER: Please state your name
12 for the record.

13 MR. GOLDEN: My name is Keith Golden,
14 G-o-l-d-e-n.

15 DIRECT EXAMINATION

16 BY MR. BABULA:

17 Q Okay.

18 A I wanted to clarify about the
19 supplemental testimony of Will Walters dated
20 November 9, 2007.

21 After that testimony was filed I talked
22 with the Air District, and apparently there was
23 some kind of a misunderstanding between Mr.
24 Walters and the Air District.

25 The bottomline is we want to remove the

1 change in AQ-3, and we're going back to the
2 original language that was filed in the final
3 staff assessment of Mr. Walters for AQ-3.

4 HEARING OFFICER SHEAN: All right.

5 MR. GOLDEN: Does the applicant have
6 that? I have it here if you want to know what
7 that was.

8 MR. THOMPSON: We have, in your
9 testimony now that's what's being recommended?

10 MR. GOLDEN: No. No. We're having the
11 AQ-3 that we're recommending it in November 9,
12 2007, that one with it redacted, is that the term?
13 Removed?

14 And we're going to go back to the
15 original FSA language of that condition AQ-3.

16 MR. THOMPSON: It's longer.

17 MR. GOLDEN: It's longer, but that was
18 the original intent of the Air District, and
19 that's the language which they're going to have in
20 their subsequent permits.

21 (Pause.)

22 HEARING OFFICER SHEAN: While they're
23 reading this let me just make sure I'm
24 understanding. I'm showing the pages came with
25 your testimony, and the AQ-3, and if that's longer

1 in somebody's mind, it's only two lines and a
2 little bit. Is that what you're --

3 MR. GOLDEN: That was the change, the
4 original AQ-3, out of the determination of
5 compliance that's in our FSA has additional
6 verbiage that apparently the Air District's intent
7 was to leave that wording in place.

8 And I can't understand -- I don't know
9 exactly what happened between Mr. Walters and the
10 technical staff down in San Joaquin, but
11 apparently there's some misunderstanding about
12 removing that verbiage. That's not correct. The
13 wording should stay in place that came in the FSA.

14 HEARING OFFICER SHEAN: So that what
15 we're seeing here in this November 9th testimony
16 is not the way it's to be?

17 MR. GOLDEN: That is correct. So in
18 other words, just remove AQ-3 from the
19 supplemental testimony of November 9th. We're
20 just going with the original testimony filed in
21 the FSA.

22 HEARING OFFICER SHEAN: Okay.

23 MR. GOLDEN: Just for that one
24 condition. AQ-SC-6, however, remains in place,
25 what we're recommending.

1 MR. THOMPSON: We're fine with that.

2 HEARING OFFICER SHEAN: Okay. We now
3 understand, too. Thank you.

4 MR. GOLDEN: Sorry for the inconvenience
5 on that one, but stuff happens.

6 HEARING OFFICER SHEAN: I haven't
7 changed it yet, so it won't be inconvenient.

8 MR. GOLDEN: Okay.

9 HEARING OFFICER SHEAN: Anything further
10 from the parties? All right, --

11 MR. BABULA: That's all of ours.

12 MR. THOMPSON: Before you close the
13 record we were all talking today and we would like
14 to thank the staff. One glance at the website
15 shows the huge number of cases that are going
16 through this Commission. And Mr. McFarlin has
17 been terrific in kind of assisting us and alerting
18 us where we had problems, and trying to get
19 through this.

20 And I know staff counsel had to replace
21 someone mid-stream, and he's been very easy to
22 deal with. And we just wanted to pass along our
23 thanks to the staff on this.

24 HEARING OFFICER SHEAN: All right. But
25 before we do close the record, I think for the

1 convenience of the Committee, as well as
2 potentially for the convenience of the full
3 Commission, when they're going to hear this
4 matter, there are a couple of things I think the
5 Committee would like to propose to take official
6 notice of.

7 First would be the -- because we've
8 already taken notice of resolution 7558. The next
9 would be the California Water Plan Outlook in
10 1974, November of 1974. The document is
11 Department of Water Resources Bulletin Number
12 16074. It's available in the Commission library.
13 It was a predecessor document to the resolution,
14 and I think even mentioned in there.

15 And also the 1977 Biennial Report of the
16 State Energy Commission, Volume 5, giving the
17 status of alternative energy technologies. And
18 Volume 7 entitled Power Plant Siting.

19 And just in case somebody needs to use
20 it, I'd like to also have the Committee take
21 notice, for the limited purpose of identifying
22 with the applicants in each of these cases, has
23 identified is proposed water use, the Sun Desert
24 notice of intention, the SDG&E Sun Desert notice
25 of intention; the PG&E Stanislaus NOI, notice of

1 intention; the PG&E Fossil 1 and 2 notice of
2 intention; And Southern California Edison CalCoal
3 notice of intention.

4 That may be more than we want to work
5 with, but we have it all.

6 MR. THOMPSON: A lot of paper there.

7 HEARING OFFICER SHEAN: Well, that's why
8 I said the limited purpose. So we're only going
9 to get down to a sentence or two in each one of
10 those.

11 All right, is there anything further?

12 ASSOCIATE MEMBER GEESMAN: If we get a
13 letter from Westlands, would it be your intent to
14 open the record to allow that?

15 HEARING OFFICER SHEAN: Yes. And I
16 think we can do that at a Committee hearing on the
17 Presiding Member's Proposed Decision.

18 So, if you get something from them
19 obviously you're going to docket it. It'll be
20 circulated among the parties. And we'll see what
21 it has to say.

22 And at that point, if the applicant
23 feels, or actually either side feels there's
24 something that they want to do with that, we'll
25 entertain that at the time. But you need to let

1 us know. So if there's a factual matter you want
2 to contest, we can throw a little evidentiary
3 proceeding into the back of our PMPD comment
4 hearing.

5 MR. THOMPSON: We will do that.

6 MR. FREEMAN: Mr. Chairman.

7 HEARING OFFICER SHEAN: Yes, go ahead.

8 MR. FREEMAN: Yes. This is Russ Freeman
9 with Westlands Water District. I've been
10 listening. I wasn't sure when I should speak,
11 but --

12 HEARING OFFICER SHEAN: This is a good
13 time,

14 MR. FREEMAN: -- on that last comment.
15 I've been directed by the General Manager here at
16 the District to send a letter to the Commission
17 basically stating that the District opposes the
18 proposed use of that backflush water.

19 HEARING OFFICER SHEAN: All right.

20 MR. FREEMAN: That should be there by
21 next week, early next week.

22 HEARING OFFICER SHEAN: All right.
23 That'll be fine. We'll take a look at it when we
24 get it.

25 MR. FREEMAN: Thank you.

1 HEARING OFFICER SHEAN: We appreciate
2 your calling in and speaking up.

3 Are there any other people who are on
4 the phone?

5 All right, we appreciate that very much.
6 Thank you.

7 Our hearing is adjourned.

8 (Whereupon, at 2:55 p.m., the
9 evidentiary hearing was adjourned.)

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CERTIFICATE OF REPORTER

I, PETER PETTY, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Hearing; that it was thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said hearing, nor in any way interested in outcome of said hearing.

IN WITNESS WHEREOF, I have hereunto set my hand this 27th day of November, 2007.

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345