

EVIDENTIARY HEARING
BEFORE THE
CALIFORNIA ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:)
)
Sunrise Cogeneration and) Docket No. 98-AFC-4
Power Plant Project)
_____)

HEARING ROOM A
1516 NINTH STREET
SACRAMENTO, CALIFORNIA

TUESDAY, JANUARY 11, 2000

9:00 a.m.

Reported By:

Debi Baker

Contract No. 170-99-001

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

COMMITTEE MEMBERS PRESENT

David A. Rohy, Commission Vice Chairman

Michal A. Moore, Commissioner

Bob Eller, Commissioner Advisor

Shawn Pittard, Commissioner Advisor

Gary Fay, Counsel, Hearing Officer

STAFF PRESENT

Caryn Holmes, Senior Staff Counsel

Marc S. Pryor, Siting Project Manager

Roberta Mendonca, Public Adviser

APPLICANT

John P. Grattan
Attorney at Law

Scott A. Galati
Attorney at Law

INTERVENOR

Katherine Poole, CURE

Marc D. Joseph
Attorney at Law

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HEARING OFFICER FAY: Good morning.

This is an evidentiary hearing for the Sunrise Cogeneration and Power Project, and we are here today to take evidence on a number of topics. The first will be Biological Resources, and last night I think we informed the parties that we'd move into Air Quality right after that. And I think, for a number of reasons, it would be better, if time allows, for us to move into Public Health and the Worker Safety leftover matters after Biology, and wait until Thursday to continue on with Air Quality.

Any concerns about that? There's a number of reasons for that. I'll tell you. The district will have rendered its decision, and I understand the plan to be here on Thursday and could -- could actually testify directly on that instead of just informing us in writing. And I understand EPA has some concerns that they want to address, and could do in a telecom here, on the record, from San Francisco, while the district representatives are here on Thursday.

So those are a couple reasons why I think that might be better.

1 Mr. Grattan?

2 MR. GRATTAN: That -- that sounds
3 generally just fine with the Applicant. I have
4 one -- one modification that I'm going to request
5 to that, and it relates -- it relates to testimony
6 on the efficacy of soot filters and/or catalytic
7 converters. And we have arranged for
8 representative of Catalytic Exhaust, which was the
9 company that staff had talked to in its -- and
10 used as a basis of its recommendation of a
11 catalytic converter.

12 We've arranged for a witness from that
13 company to arrive here from Canada at
14 approximately one o'clock this afternoon, was the
15 only time we could get him. And if we could
16 reopen that section, and you will remember that we
17 were -- we had witnesses here from the soot filter
18 distributor, which we hadn't anticipated, hadn't
19 expected, and we -- we would request --

20 HEARING OFFICER FAY: As a surrebuttal

21 --

22 MR. GRATTAN: -- 15 minutes to a half-
23 hour, probably, at one o'clock.

24 HEARING OFFICER FAY: Sure.

25 MR. GRATTAN: Thank you.

1 HEARING OFFICER FAY: We have no problem
2 with that. That's okay.

3 Any objection?

4 MS. POOLE: We just have one concern
5 about the worker safety portion. Since that was
6 scheduled last, we are not prepared to address
7 that today.

8 HEARING OFFICER FAY: Okay.

9 MS. POOLE: But other than that, we're
10 happy to skip on to Public Health.

11 HEARING OFFICER FAY: Well, what I had
12 told you, I know, yesterday, was that we would
13 squeeze Mr. Tyler in as part of Public Health, and
14 take your portion last, and we can certainly honor
15 that if you're not prepared to -- to move forward
16 today. That's -- that's fine.

17 And all this is subject to what time
18 allows. But assuming Biology doesn't take all
19 day, we want to get going on Public Health, so I
20 think that will work.

21 And, Ms. Holmes, do you have some
22 preliminary information for us?

23 MS. HOLMES: I -- I did have -- I wanted
24 to report on the record the conversations that I
25 had with EPA after the hearings yesterday.

1 However, given that Dr. Charleton is supposed to
2 be joining us via telephone in five minutes,
3 perhaps I could do that later in the morning, and
4 we could proceed with Biology now.

5 HEARING OFFICER FAY: Okay. And you'll
6 have somebody make the call as Mr. York is
7 wrapping up?

8 MS. HOLMES: Yes, we will.

9 HEARING OFFICER FAY: Okay. Could the
10 court reporter please swear Mr. York, who -- and
11 also --

12 (Thereupon, Rick York and Linda Spiegel
13 were, by the reporter, sworn to tell the
14 truth and nothing but the truth.)

15 MS. HOLMES: The first thing I'd like to
16 do, Mr. Hearing Officer, is identify some
17 exhibits.

18 The first is Biological Resources
19 section of the FSA Part 3, Testimony of Rick York
20 and Linda Spiegel.

21 HEARING OFFICER FAY: That will be
22 Exhibit 63.

23 (Thereupon, Exhibit 63 was marked for
24 identification.)

25 MS. HOLMES: Second, this is not a

1 document that we distributed, but we have referred
2 to it. It's the study that Ms. Spiegel prepared
3 in 1996 that's referenced --

4 HEARING OFFICER FAY: Excuse me. I'd
5 like this to the rule for the rest of the
6 hearings. Anybody who wants an exhibit
7 identified, would you please provide me a copy.
8 If not now --

9 MS. HOLMES: I will do my best to get
10 you another copy as soon as I get --

11 HEARING OFFICER FAY: If not right
12 during the hearing, then I need it as soon
13 afterwards as possible, for the official exhibit
14 file. Otherwise, we just won't have one, so.

15 MS. HOLMES: Okay. This is studies of
16 the San Joaquin kit fox --

17 HEARING OFFICER FAY: Could I have you
18 identify again Exhibit 63?

19 MS. HOLMES: Exhibit 63 is the
20 Biological Resources portion of the FSA, Part 3,
21 testimony of Rick York and Linda Spiegel.

22 HEARING OFFICER FAY: All right.

23 MS. HOLMES: And I'm asking that a
24 document entitled Studies of the San Joaquin Kit
25 Fox in undeveloped and oil developed areas, August

1 1996, be identified as Exhibit 64. This is the
2 study that was prepared by Ms. Spiegel, and is
3 referenced in the Biological Resources testimony.

4 HEARING OFFICER FAY: And that will be
5 Exhibit 64.

6 (Thereupon, Exhibit 64 was marked for
7 identification.)

8 MS. HOLMES: And then, last, we have a
9 letter that Mr. York received yesterday from the
10 Department of Conservation. Why don't we mark it
11 now, and he can explain what it is when he
12 testified.

13 HEARING OFFICER FAY: Okay. Can you
14 identify that a little more clearly?

15 MS. HOLMES: It looks like it's actually
16 two letters. The first one is from the Department
17 of Conservation, entitled Notice to Kern County
18 Operators, dated January 6th, 1997. Stapled to
19 that is a letter to District Deputy Supervisor Hal
20 Bopp from the Department of Interior, U.S. Fish
21 and Wildlife Service, dated May 4th, 1997.

22 And I can distribute copies of these if
23 people would like them.

24 HEARING OFFICER FAY: Have those been
25 docketed?

1 MS. HOLMES: I believe they have. They
2 were supposed to be docketed this morning.

3 HEARING OFFICER FAY: All right. Go
4 ahead.

5 MS. HOLMES: Thank you. Excuse me, do
6 we have a number for those exhibits? Are these
7 numbered separately, or as one?

8 HEARING OFFICER FAY: The two letters
9 you just passed out --

10 MS. HOLMES: I was asking that they be
11 identified as one.

12 HEARING OFFICER FAY: Exhibit 65. The
13 attached two letters.

14 (Thereupon, Exhibit 65 was marked
15 for identification.)

16 TESTIMONY OF

17 RICK YORK AND LINDA SPIEGEL

18 called as witnesses on behalf of the Commission
19 staff, having been first duly sworn, were examined
20 and testified as follows:

21 DIRECT EXAMINATION

22 MS. HOLMES: Mr. York and Ms. Spiegel,
23 did you prepare the Biological Resources testimony
24 that's just been identified as Exhibit 63?

25 MS. SPIEGEL: Yes.

1 MR. YORK: I did.

2 MS. HOLMES: And, Ms. Spiegel, is there
3 a statement of your qualifications included in the
4 FSA Part 3?

5 MS. SPIEGEL: Yes, there is.

6 MS. HOLMES: And Mr. York, I notice that
7 your qualifications were inadvertently omitted.
8 Could you very briefly summarize them?

9 MR. YORK: Yeah. I have undergraduate
10 degrees in biological resources and botany from
11 Humboldt State University. I got those degrees in
12 1980. Since that time I've worked for the Nature
13 Conservancy, Bureau of Land Management, Department
14 of Fish and Game, and for the last 11 years at the
15 California Energy Commission as a biologist.

16 MS. HOLMES: And do you have any
17 corrections to make to your written testimony
18 today?

19 MR. YORK: No, I do not.

20 MS. HOLMES: Are the facts contained in
21 your testimony true and correct to the best of
22 your knowledge?

23 MR. YORK: Yes, they are.

24 MS. HOLMES: And do the opinions
25 contained in your testimony represent your best

1 professional judgment?

2 MR. YORK: Yes, they do.

3 MS. HOLMES: At this point I would like
4 you to summarize your testimony, and if you could
5 include an explanation of what Exhibit 65 is in
6 that summary that would be very helpful.

7 MR. YORK: Okay. The focus of my
8 testimony as to make certain that the Sunrise
9 Project abides by state, federal and local laws
10 and regulations regarding the protection of
11 sensitive species and their habitats during the
12 project construction and operation.

13 The three things that are needed for
14 this project to show that they will be in
15 compliance with those things are the Federal
16 Biological Opinion from the Fish and Wildlife
17 Service, State Incidental Take Permit from the
18 Department of Fish and Game, and a Streambed
19 Alteration Agreement, also from the Department of
20 Fish and Game.

21 There are a lot of sensitive species in
22 this area of the project. There are 12 plant
23 species that are considered sensitive, and 26
24 wildlife species. So lots of things to keep in
25 mind.

1 Some examples of these sensitive species
2 are the San Joaquin kit fox, bluntnose leopard
3 lizard, burrowing owl, and huverus areastromen and
4 the recurrent larkspur. Those last two are
5 plants.

6 The direct effects of this project are
7 related to the actual construction of the power
8 plant and transmission line, primarily. There
9 were -- will be permanent and temporary effects on
10 the habitat, and there will be a permanent loss of
11 28.8 acres of habitat and a temporary disturbance
12 to 31.5 acres.

13 The compensation amount, after using
14 compensation ratios, the Applicant will need to
15 provide compensation for 125.9 acres.

16 The indirect effects of this project,
17 that's the 700 new wells, both oil production
18 wells and steam injection wells, and associated
19 new roads that'll be necessary, the permanent loss
20 of habitat is 176.4 acres. Multiply that by
21 three, which is the compensation ratio for the
22 permanent loss of private habitat, and the
23 compensation necessary will be for 529.2 acres.

24 If you combine these two acreage
25 amounts, the project will be required to provide

1 habitat compensation for 655.1 acres. The
2 compensation amount that will be required is --
3 will need to be \$1,000 per acre, so \$1,000 times
4 655.1 is a total of \$655,100.

5 The staff has proposed, and the
6 Applicant has agreed, that this compensation
7 amount will be provided to the Center for Natural
8 Lands Management, and the habitat compensation
9 will occur at the Lokern Preserve. This is the
10 same preserve where the La Paloma project is also
11 providing its habitat compensation. Currently,
12 that preserve is about 3500 acres in size.

13 One of the things that we've all focused
14 on during this siting project is the actual
15 creation of what's called the Biological Resource
16 Mitigation Implementation and Monitoring plan, the
17 BRMIMP. The Applicant has provided a couple of
18 different drafts of this very important document.
19 This document contains all the proposed mitigation
20 measures, all that are required, all that they
21 expect to be required by the Fish and Wildlife
22 Service and the Department of Fish and Game.

23 On November 30th, a draft, a very good
24 draft was provided by the Applicant, and it was a
25 very good start on that document. The plan is

1 that the final terms and conditions that'll be
2 contained in that document, including incidental
3 take permit conditions, streambed alteration
4 agreement, terms and conditions -- terms and
5 conditions found in the biological opinion from
6 the Fish and Wildlife Service, all those will be
7 rolled in to that document, and it will need to be
8 finalized and approved by all those participants
9 at least 60 days to beginning any ground
10 disturbance activity.

11 One other La Paloma note. The Applicant
12 was able to get a copy of La Paloma's mitigation
13 monitoring plan, and has used that document. And
14 that document is in a final form.

15 I'd like to summarize the Valley Waste
16 issue. CURE has argued that birds may be exposed
17 to hazardous levels of benzene at the percolation
18 and evaporation ponds at Valley Waste. Valley
19 Waste is the -- is the -- will be the recipient of
20 the waste stream, wastewater stream from not only
21 the power plant but also the water treatment
22 facility. And this is as a result of the project
23 wanting to use produced water from the oil field
24 to ultimately create steam to be injected into the
25 ground for thermally enhanced oil recovery.

1 I was able to contact Larry Bright
2 yesterday. He's the manager of the Valley Waste
3 facility, and I got a very good idea of the
4 operations out there, so I could try to get a
5 better understanding of whether or not I feel
6 birds are being exposed, or are likely to be
7 exposed to hazardous levels of various chemicals
8 out there.

9 I'd like to summarize very briefly here
10 the actual process out there. The waste stream
11 from this project is put into a pipe where it's
12 essentially merged with other wastes from the oil
13 field. It's put into a pipeline which heads to
14 Valley Waste, essentially downhill. This Valley
15 Waste facility is permitted by the Regional Water
16 Quality Control Board.

17 When it goes to Valley Waste it goes
18 into the first of six ponds. These are ten feet
19 deep ponds, they're 60 by 40 feet. They're not
20 screened. There's no netting over them. The
21 sides on these ponds are steep. Steep sided ponds
22 are what we would prefer, because it minimizes the
23 actual surface area for where birds can actually
24 go the shore of that water and have access to
25 things that may be in the water.

1 These six ponds are what are called
2 cleaning ponds. Once the waste gets in the pond
3 number one, let's call it, it's pumped to the next
4 five ponds. As I said, there were six ponds.
5 What happens at all of those six ponds is there
6 are trucks that periodically daily drive out to
7 those ponds and actually vacuum up the oil and
8 grease that's found on the top of those ponds.
9 And these ponds are what are called evaporation
10 ponds, or percolation ponds.

11 So we've got six deep 60 by 40 ponds.
12 There's an additional six large ponds out there
13 that are only used, according to Larry Bright,
14 under contingency situations. In other words,
15 they're not used very often. These are much
16 larger ponds, and they're used when there's a
17 power outage at the -- at the waste facility. And
18 waste that's coming from the oil field is put out
19 into the end of those contingency ponds. When the
20 power for the pumps is back on, if that occurs,
21 then it's -- it's pumped from those contingency
22 ponds into the six again, and it goes through its
23 cleansing process for those six ponds.

24 Once it's passed pond six, it goes to
25 one large pond, which is 500 by 70 feet. This is

1 a shallow holding pond. That water, and what's in
2 that water, is -- then goes through a filtration
3 system at the facility there, and what results
4 from that is injected into the ground. The
5 Department of -- DOGR, excuse me, geothermal
6 resources and oil and gas, they permit that --
7 that injection well.

8 I'm sorry this summary's gone so long.

9 HEARING OFFICER FAY: Mr. York, if I
10 could interrupt you. We're --

11 MR. YORK: We're at that time.

12 HEARING OFFICER FAY: I believe we said
13 I have an appointment at 9:20. It's 9:25 now. Do
14 you need to make a transition to our next witness,
15 or can we interrupt here? All right.

16 Let's go ahead and make sure we make our
17 connection.

18 While Mr. Pryor is calling, do you have
19 any introduction for the subject?

20 MR. YORK: Can I summarize? I'm going
21 to move to the summary for the H2S issue.

22 Dr. Michael Fry, on behalf of CURE, has
23 provided testimony that suggests that the San
24 Joaquin kit fox, a state and federally listed
25 species, is being impacted by H2S emissions at the

1 midway Sunset oil field. They site in 1997 a
2 published paper by Dr. Kristin Charleton, who
3 we're trying to reach by phone. And they cite
4 this --

5 (NOTE: Telephone call being placed.)

6 MR. PRYOR: Good morning. This is Marc
7 Pryor, with the Energy Commission.

8 DR. CHARLETON: Good morning.

9 MR. PRYOR: Are you Dr. Charleton?

10 DR. CHARLETON: Yes, I am.

11 MR. PRYOR: Good morning. Mr. Gary Fay
12 is the Hearing Officer, and I'm going to turn it
13 over to him now.

14 DR. CHARLETON: Okay.

15 HEARING OFFICER FAY: Good morning, Dr.
16 Charleton. Can you hear me?

17 DR. CHARLETON: I can. There might be
18 some difficulty, there's a lot of other noise
19 around, unfortunately.

20 HEARING OFFICER FAY: All right. Well,
21 please indicate at any time that you cannot hear
22 what is being said.

23 This is a formal evidentiary hearing,
24 and it is being recorded by a court reporter. And
25 Rick York, who I believe you know and have spoken

1 to, was just giving an introduction to your
2 testimony. And I'll let him finish, and when we
3 get to your testimony, the court reporter will
4 swear you in as a witness. We'd like you to give
5 your summary of your position, and then you will
6 be subject to cross examination by the other
7 parties. Is that your understanding?

8 DR. CHARLETON: Yes.

9 HEARING OFFICER FAY: Okay. I'll go
10 ahead and have Mr. York lead in, then.

11 Mr. York, please continue.

12 MR. YORK: Thank you.

13 I'll start with my summary again.

14 HEARING OFFICER FAY: Get closer to the
15 microphone.

16 MR. YORK: Okay. The H2S issue has been
17 brought up by CURE, Dr. Michael Fry on behalf of
18 CURE has provided testimony where they contend
19 that the San Joaquin kit fox, a state and
20 federally listed species, is being impacted by H2S
21 emissions at the midway Sunset oil field.

22 Dr. Fry cites a 1997 unpublished paper
23 by Dr. Kristin Charleton as reason for evidence of
24 these impacts. This paper was contracted for by
25 the Energy Commission to analyze some blood and

1 tissue samples from kit fox and deer mice in the
2 oil field, and from the same species at the -- at
3 the Lokern Natural Area nearby, which is the
4 location where the compensation will occur.

5 Dr. Charleton's study indicated that the
6 kit fox and deer mice showed some possible
7 indications that the animals may be affected by
8 exposure to one or more potentially toxic
9 substances found in the oil field. H2S exposure
10 was mentioned, but not singled -- but not singled
11 out as the reason for the potential pathological
12 effects that were seen.

13 Dr. Charleton was not able to identify
14 what may be causing these pathological changes,
15 and was only able to conclude that further study
16 was warranted. Dr. Charleton concluded that a
17 better controlled study was necessary.

18 Dr. Charleton's paper was submitted for
19 publication to the Journal of Wildlife Diseases,
20 and was rejected in 1999, June of 1999. The
21 reasons for the rejection were serious flaws in
22 the study design, sample size was too small, and
23 problems with the data presentation were mentioned
24 also.

25 Staff chose not to use Dr. Charleton's

1 paper because it was rejected for publication, and
2 was not able to provide sufficient evidence as to
3 what may be responsible for possible pathological
4 effects. Dr. Charleton agrees with the editor's
5 criticisms of her paper, and urged staff not to
6 rely upon her study.

7 Another study that was completed here by
8 Linda Spiegel, sitting to my right, addresses
9 specifically how the kit fox is doing out in the
10 midway Sunset oil field, and compared the kit fox
11 in the Lokern Natural Area. This is a staff
12 report that was put together in 1996.

13 Her study found for adult foxes that
14 there were no significant differences in how long
15 the foxes lived and how many pups they had when
16 you compared the oil developed area foxes to the
17 natural area foxes. And she's here to talk about
18 her paper, if you'd like.

19 HEARING OFFICER FAY: All right. Dr.
20 Charleton, we're going to swear you in at this
21 time. Would the court reporter please do that.

22 (Thereupon, Dr. Kristin Charleton was,
23 by the court reporter, sworn to tell
24 the truth and nothing but the truth.)

25 DR. CHARLETON: Yes, I do.

1 MS. HOLMES: Good morning, Dr.
2 Charleton. This is Caryn Holmes, the CEC staff
3 counsel.

4 DR. CHARLETON: Good morning.

5 MS. HOLMES: Good morning. What I'd
6 like to do now is have the Hearing Officer
7 identify two exhibits that we talked about. The
8 first one is the declaration of Dr. Kristin
9 Charleton, dated December 17th, 1999.

10 HEARING OFFICER FAY: That will be
11 identified as Exhibit 66.

12 (Thereupon, Exhibit 66 was marked
13 for identification.)

14 DR. CHARLETON: Excuse me. Was that
15 five-six?

16 HEARING OFFICER FAY: Six-six.

17 DR. CHARLETON: Once again?

18 HEARING OFFICER FAY: Six-six.

19 MS. HOLMES: Six-six.

20 DR. CHARLETON: Thank you.

21 MS. HOLMES: The second document is one
22 that we failed to distribute, but which all the
23 parties have had copies of for quite some time.
24 In fact, CURE obtained it first. It is the letter
25 to Dr. Charleton from the Journal of Wildlife

1 Diseases, and I have copies of that available
2 here.

3 HEARING OFFICER FAY: And would you like
4 that marked for exhibit as well?

5 MS. HOLMES: Yes.

6 HEARING OFFICER FAY: That will be
7 Exhibit 67.

8 (Thereupon, Exhibit 67 was marked
9 for identification.)

10 DR. CHARLETON: Thank you.

11 TESTIMONY OF

12 DR. KRISTIN CHARLETON

13 called as a witness on behalf of Commission staff,
14 having been first duly sworn, was examined and
15 testified as follows:

16 DIRECT EXAMINATION

17 BY MS. HOLMES:

18 Q Dr. Charleton, did you prepare the
19 declaration that's been identified as Exhibit 66?

20 A Yes, I did.

21 Q And does that document include a
22 statement of your qualifications?

23 A I'm sorry, could you repeat that
24 question?

25 Q Does the document contain a statement of

1 your qualifications?

2 A Yes, it does.

3 Q Do you have any corrections to make to
4 the declaration today?

5 A No, I do not.

6 Q Are the facts in your declaration true
7 and correct, to the best of your knowledge?

8 A Yes, it is.

9 Q And does -- do the opinions contained in
10 your declaration represent your best professional
11 judgment?

12 A I'm sorry, one more time.

13 Q Do the opinions contained in your
14 declaration represent your best professional
15 judgment?

16 A Yes, they do.

17 Q Could you please explain the report that
18 you prepared, and summarize your declaration?

19 A Yes, I will. From 1991 to 1993, I
20 sampled deer mice and kit foxes inhabiting the
21 intensively developed midway Sunset oil field in
22 Kern County, California. I examined them for
23 evidence of physical and physiological changes
24 that might be related to exposure to
25 petrochemicals.

1 We did detect some differences in a few
2 populations. In animals from the oil field, we
3 found a significantly higher proportion of a
4 condition called extra magillary hematopoiesis in
5 deer mice, and in the kit foxes we found a
6 significantly higher proportion of immature red
7 blood cells in -- in the kit foxes in the oil
8 fields. And this led me to -- to believe that
9 they may be exposed to conditions that lead to
10 hypoxia, which is low oxygen, which might explain
11 these few findings in animals from the oil field.

12 I am not able to -- to say what the
13 specific mechanisms are that produced these
14 changes that I found. Possibilities include toxin
15 induced anemia, which has been reported in several
16 studies of animals exposed to oil fields,
17 inhibition of certain enzymes which in some cases
18 have been shown to be inhibited by hydrogen
19 sulfide, or other as yet unidentified processes.

20 We also found a lesion in deer mice
21 called corticovascularization, and I -- I don't
22 know exactly what would cause that. A similar
23 condition is normal in certain species of mice.
24 There is some line of reasoning that that could be
25 attributed to hypoxic conditions, but certainly we

1 don't know that for sure. I think the etiologies
2 are very complex, and I think with the number of
3 oil field chemicals that exist, somewhere I heard
4 about 6,000 are present in an oil field
5 environment, I don't know, I don't believe it's
6 possible to know the exact biological mechanisms
7 that produced the findings that we -- that we
8 found. And it's possible that there are many
9 factors working together that cause these, or
10 separate factors that caused the different
11 findings.

12 My final conclusion is that there were
13 some differences in the -- between the two
14 populations, as far as these clinical findings.
15 We don't know what caused them. There is no
16 evidence of hydrogen sulfide causing anything
17 similar in any studies that have been to date. We
18 need further investigation before we can
19 definitely make a conclusion.

20 MS. HOLMES: Thank you.

21 Mr. Fay, at this time what I'd like to
22 suggest that we do is move the exhibits into
23 evidence, 63 through 67, and make the witnesses
24 available for cross examination on the H2S issue.
25 I believe that Mr. York also has additional

1 testimony on the status of the Fish and Wildlife
2 Service process and the California Department of
3 Fish and Game process. But I would suggest that
4 we deal with the H2S issue first, so that Dr.
5 Charleton doesn't have to sit through -- sit
6 through the other discussions.

7 So what I'd like to do is to make the
8 witnesses available for the H2S issue now, and
9 then come back to the summary after we're done
10 with that on the other areas.

11 HEARING OFFICER FAY: That's what we'll
12 do.

13 Is there objection to receiving the
14 exhibits?

15 I hear none. So ordered.

16 (Thereupon, Exhibits 63, 64, 65, 66 and
17 67 were received into evidence.)

18 HEARING OFFICER FAY: And Dr. Charleton
19 is now available for cross examination, along with
20 Ms. Spiegel and Mr. York.

21 MS. HOLMES: On the H2S issue.

22 HEARING OFFICER FAY: On the H2S issue.

23 MS. HOLMES: Thank you.

24 HEARING OFFICER FAY: Does the Applicant
25 have any cross examination on that topic?

1 MR. GALATI: No. No further questions.

2 HEARING OFFICER FAY: All right. CURE.

3 MS. POOLE: Thank you.

4 CROSS EXAMINATION

5 BY MS. POOLE:

6 Q Dr. Charleton, can you hear me?

7 A Yes.

8 Q This is Kate Poole, I represent CURE.

9 A Yes.

10 Q When you performed the study that we're
11 discussing today, the 1997 study, you were a grad
12 student at UC Davis; correct?

13 A I'm sorry, could you repeat that
14 question?

15 Q When you performed the study that we're
16 discussing today --

17 A Yes.

18 Q -- you were a grad student at UC Davis;
19 correct?

20 A I was a veterinary student at UC Davis.

21 Q Did you consult with Professor Michael
22 Fry about any aspect of this study?

23 A I spoke with Dr. Fry at the onset of the
24 study. Yes.

25 Q Was this study prepared under the

1 supervision of professors at UC Davis?

2 A Not exactly supervision, but I did
3 consult with several for advice.

4 Q Did you consult with a statistician when
5 you prepared it?

6 A I'm very sorry. Can you repeat that?

7 Q Did you consult with a statistician when
8 you prepared the study?

9 A Yes, I did.

10 Q And did they confirm that the sample
11 size would be statistically valid?

12 A Yes. In his opinion, yes.

13 Q And did you physically examine the
14 animals you collected?

15 A Yes, I did. Well, let me take that
16 back. Part of them. I didn't examine the foxes.
17 I examined the -- the deer mice. And -- yeah,
18 that's all.

19 Q And you observed physical differences
20 between animals in the oil field and animals in
21 the Lokern Natural Area?

22 A Yes.

23 Q At the time you submitted this paper you
24 believed hydrogen sulfide was a possible
25 explanation for the observed differences; correct?

1 A Possible of many, but I did stress in my
2 paper that was submitted that it's -- it's not
3 likely that you're able to pin it on one chemical.
4 It's probably multi-factorial.

5 Q But hydrogen sulfide is a possible
6 explanation for the differences that you observed;
7 correct?

8 A Well, that was the line of reasoning I
9 followed based on what I know about physiology,
10 but I was a little disturbed, or not comfortable
11 making that statement because there is no
12 published data that really supports it.

13 Q Can you state that hydrogen sulfide is
14 not the cause of the effects that you observed?

15 A Oh, I cannot say it's not, and I can't
16 say that it is. It needs far more study before
17 anything that definitive can be said.

18 Q Did you observe any parasites on the
19 animals that you examined?

20 A No, not in the mice. No.

21 Q So you're speculating about other
22 possible causes that are identified in your
23 declaration; correct?

24 A Yeah, most of the possible reasons I
25 gave were speculation. Where scientific data were

1 available to support the speculation, I included
2 that.

3 Q Who did you discuss this declaration
4 which you've submitted with before you prepared
5 it?

6 A I'm sorry, could you repeat that,
7 please?

8 Q Could you tell us who you discussed the
9 declaration that you've submitted in this
10 proceeding with before you prepared it?

11 A Yes. Doctor -- or, not, Rick York.

12 Q You refer to laboratory studies in
13 several places in your declaration. Did any of
14 these studies examine effects on kit fox or
15 peromyscus?

16 A The -- the studies performed by others
17 previously?

18 Q The laboratory status that you refer to
19 in your declaration.

20 A Let me refer to my declaration.

21 Q It would maybe help if you could --

22 A I don't know that I'm hearing you
23 clearly. Are you referring to a part of my
24 declaration and asking me about that?

25 Q Please identify that, okay?

1 A I'm sorry, I'm not getting you very
2 well. Could you ask your question one more time?

3 Q Yes. Just a minute, please. I'm trying
4 to identify the spot in your declaration.

5 A Okay.

6 Q In paragraph five of your declaration.

7 A Let me find it. Yes.

8 Q On the second page, ten lines from the
9 top.

10 A Uh-huh.

11 Q You refer to controlled studies of
12 laboratory animals.

13 A Yes.

14 Q Did those studies examine effects on kit
15 fox or peromyscus?

16 A No, I believe they were laboratory rats
17 and laboratory mice. And maybe some others. But
18 not kit foxes and not peromyscus.

19 Q Seven lines down from that you refer
20 again to another lab study.

21 A Yes.

22 Q Did that study examine effects on kit
23 fox or peromyscus?

24 A No, those are standard laboratory
25 animals also.

1 Q And in the following sentence, same
2 question.

3 A Laboratory animals, again. No
4 peromyscus or kit fox.

5 Q And again, approximately five lines down
6 from that.

7 A The laboratory rodents?

8 Q Yes.

9 A Laboratory rodents again.

10 Q And again, approximately four lines down
11 from that you refer to controlled studies of
12 laboratory animals.

13 A Yes. Laboratory animals, no kit fox or
14 deer mice.

15 MS. POOLE: Thank you very much, Dr.
16 Charleton.

17 DR. CHARLETON: You're welcome.

18 HEARING OFFICER FAY: Those all your
19 questions, Ms. Poole?

20 Is there any other party here who wishes
21 to cross examine the witness, or these witnesses
22 on the H2S issue?

23 Any redirect?

24 MS. HOLMES: I have -- I have one
25 question.

1 REDIRECT EXAMINATION

2 BY MS. HOLMES:

3 Q Dr. Charleton, a few minutes ago the
4 attorney from CURE asked you whether or not you
5 were speculating about other, in other words non-
6 H2S causes for some of the differences that you
7 identified, do you recollect that?

8 A Yes.

9 Q Would you -- would you agree that a
10 statement that the differences that you identified
11 are due to hydrogen sulfide is also speculation?

12 A I'm sorry, the very last part I did not
13 hear.

14 Q I said, would you agree that a statement
15 that attributes these causes to hydrogen sulfide
16 is also speculation?

17 A With -- in the absence of published
18 literature, yes, I would have to say it's -- it's
19 speculation and -- and reasoning.

20 MS. HOLMES: Thank you very much. Those
21 are all of my questions.

22 HEARING OFFICER FAY: Mr. Galati, you
23 have some questions for the witness?

24 ///

25 ///

1 REXCROSS EXAMINATION

2 BY MR. GALATI:

3 Q Dr. Charleton, this is Scott Galati. I
4 represent the Applicant.

5 A Hello.

6 Q I just have one question for you. On
7 cross examination from CURE's attorney you had --
8 went through a litany of referring to results of
9 laboratory animals. Do you remember that
10 testimony?

11 A Yes.

12 Q Were there any studies of deer mice and
13 -- and kit fox on H2S in which you could rely on,
14 instead of those laboratory studies?

15 A No.

16 MR. GALATI: Thank you.

17 HEARING OFFICER FAY: Recross?

18 REXCROSS EXAMINATION

19 BY MS. POOLE:

20 Q This is Kate Poole again, Dr. Charleton.

21 A Yes.

22 Q Have you reviewed -- well, you said that
23 you reviewed Dr. -- Professor Michael Fry's
24 testimony, submitted on October 15th; correct?

25 A Yes.

1 Q On page ten of that testimony, Professor
2 Fry refers to a study by -- hold on just a second.

3 (NOTE: Air boat sounds interfering.)

4 THE WITNESS: Okay. Sorry about that.

5 MR. GALATI: I'd rather be there than
6 here.

7 (Laughter.)

8 THE WITNESS: Oh, no. This is kind of
9 stressful. I can't hear you guys. Anyway, page
10 ten.

11 BY MS. POOLE:

12 Q Yes. On page ten, Dr. Fry refers to a
13 study by Kahn. Are you familiar with that study?

14 A Let me find it. Whereabout is that?

15 Q Right at the top of the page, it's
16 referred to.

17 A Okay. Okay. I'm -- yes, I have
18 reviewed that, yes.

19 Q Doesn't that study show specific effects
20 of hydrogen sulfide on laboratory animals?

21 A Yes, apparently it does.

22 Q And aren't they the same as you found in
23 peromyscus?

24 A I'm sorry, one more time?

25 Q Are these effects the same as you found

1 in peromyscus?

2 A We've -- no, they're not. We saw
3 decreases in cytochrome oxidates, but they -- you
4 know, these -- the conditions were different. The
5 study is not directly comparable.

6 MS. POOLE: Thank you.

7 HEARING OFFICER FAY: All right. Are
8 there any other questions for this panel?

9 I see no indication, so --

10 MS. POOLE: Non-hydrogen sulfide can
11 come later for these two?

12 HEARING OFFICER FAY: That's right.
13 This is only regarding hydrogen sulfide.

14 Dr. Charleton, we thank you for your
15 testimony, and appreciate your help that you gave
16 the committee. And you are excused as a witness.

17 DR. CHARLETON: Thank you.

18 HEARING OFFICER FAY: All right. I want
19 to thank everybody for their cooperation. It's
20 always difficult this way, but --

21 COMMISSIONER ROHY: Can I ask a
22 question?

23 HEARING OFFICER FAY: Yes.

24 COMMISSIONER ROHY: This has nothing to
25 do with the witness, but I would like to know,

1 just from a personal point of view, what a
2 peromyscus is.

3 MS. POOLE: A mouse.

4 HEARING OFFICER FAY: Deer mice.

5 COMMISSIONER ROHY: Is that another name
6 for a deer mouse?

7 MS. POOLE: Yes.

8 COMMISSIONER ROHY: So when you say
9 peromyscus and deer mice, you're talking about the
10 same specie, or is it a particular type of specie?

11 MR. YORK: Peromyscus is the genus.
12 There's several different species of -- of
13 peromyscus, but all deer mice.

14 COMMISSIONER ROHY: Thank you.

15 HEARING OFFICER FAY: All right.

16 MS. HOLMES: Should we continue now with
17 --

18 HEARING OFFICER FAY: Ms. Holmes, would
19 you like to continue with the staff's presentation
20 on biology?

21 MS. HOLMES: Yeah, I was just going to
22 ask Mr. York to continue his summary, his brief
23 summary.

24 MR. YORK: With regards to the H2S
25 issue, one thing I was not able to mention was

1 that on December 8th I contacted my biological
2 resource counterparts at the California Department
3 of Fish and Game and Fish and Wildlife Service and
4 BLM. They're all here today if you'd like to talk
5 to any of them, have questions for them.

6 I asked them whether or not they felt
7 that the H2S issue was something that would -- and
8 in their case, ask for additional mitigation other
9 than what the Applicant has already -- knows it
10 has to do to control its VOC emissions, including
11 H2S. Like I said, on December 8th I consulted
12 these agency biologists, and they did not feel
13 that additional mitigation was necessary.
14 They felt there was a lack of solid evidence to
15 show that the current H2S issue, or levels are
16 affecting the San Joaquin kit fox.

17 In addition, staff and the other
18 biologists do not feel that the additional H2S
19 that will result from this project will push the
20 H2S levels to where they will be -- there will be
21 impacts to the San Joaquin kit fox.

22 I wanted to provide you with an update
23 on the three documents that this project will be
24 needing for it to be able to move forward.

25 First, you'll need to get a federal

1 biological opinion. We have Susan Jones here
2 today, from the Fish and Wildlife Service. She's
3 participated throughout the entire process here,
4 and she's here today to answer anyone's questions
5 about the status of the biological opinion. The
6 Applicant has not received its biological opinion
7 to date.

8 The state incidental take permit, we've
9 received a letter from the Department of Fish and
10 Game stating that they have participated in the
11 process so far, and they essentially liked what
12 they saw, and they felt that the Applicant was
13 making all the right motions, that they would be
14 able to comply with the terms and conditions that
15 would be found in their incidental take permit
16 from the Department of Fish and Game. The
17 incidental take permit will be provided after the
18 committee's decision is available.

19 Going back to the biological opinion, we
20 would hope and expect that the federal biological
21 opinion will be provided to the Applicant prior to
22 the committee's decision.

23 With regards to the streambed alteration
24 permit, we heard today from Donna Daniels, who's
25 also here, Donna's my counterpart at the

1 Department of Fish and Game out of Fresno. She
2 indicates that the streambed alteration permit is
3 about wrapped up, and the Applicant should be
4 receiving that agreement very -- very soon.

5 And I can answer any questions about the
6 -- if you have some other comments or questions
7 about the status of these -- these important
8 documents. And I know that my agency contacts are
9 here today to answer any questions, as well.

10 HEARING OFFICER FAY: Mr. York, when you
11 say some of these are expected prior to or after
12 the committee decision, you mean the proposed
13 decision by the committee, or the Commission's?

14 MR. YORK: The Commission's decision.
15 For the incidental take permit, on the La Paloma
16 project that incidental take permit was -- Fish
17 and Game's regulations seemed to indicate that
18 they do not provide that take permit until they've
19 seen the final committee decision document, and
20 then they base their final comments in that permit
21 on that final decision document.

22 HEARING OFFICER FAY: And in the case of
23 the biological opinion, even if it did not come
24 out prior to the Commission's decision, the
25 Applicant would not be able to begin construction

1 until it did come out. Is that correct?

2 MR. YORK: I believe that's the case.

3 They essentially get their marching orders with
4 regards to federally listed species in that
5 opinion, and they cannot begin to do anything out
6 there until that document is provided. And those
7 terms and conditions found in that -- in that
8 biological opinion are included in their
9 mitigation and monitoring plan, which is what we
10 require.

11 HEARING OFFICER FAY: Even if they are
12 different from what the Commission includes; is
13 that correct?

14 MR. YORK: We don't expect them to be
15 different, but they may.

16 HEARING OFFICER FAY: But since it's a
17 federal agency, they -- they would be imposed,
18 regardless of what the Commission stated; is that
19 correct?

20 MR. YORK: I would assume so. Yes. We,
21 like I said, we don't anticipate them to be
22 different. We've been talking about various
23 issues for several months now, and at this time I
24 would not expect there to be any surprises in the
25 biological opinion. There still may be, but Susan

1 Jones may be able to speak a little more about
2 that, if you'd like to hear from her.

3 HEARING OFFICER FAY: I think it'd be
4 helpful for the committee to -- to hear from Ms.
5 Jones on her assessment of the likelihood for the
6 biological opinion to be in sync with what staff's
7 analysis shows.

8 MS. HOLMES: We have -- we also have the
9 California Department of Fish and Game
10 representative here, as well.

11 HEARING OFFICER FAY: That would be
12 helpful.

13 MS. HOLMES: Do you want to bring them
14 now, or do you want to do this later?

15 HEARING OFFICER FAY: Whatever fits in
16 with your presentation.

17 MS. HOLMES: Let's do it now, then.

18 HEARING OFFICER FAY: Okay.

19 MS. HOLMES: Why don't we bring Donna
20 Daniels and Sue Jones to the table.

21 HEARING OFFICER FAY: Are you folks
22 willing to be sworn as witnesses? Speak for your
23 agency? That would be great.

24 Please swear the witnesses.

25 ///

1 (Thereupon, Susan Jones and Donna
2 Daniels were, by the court reporter,
3 sworn to tell the truth and nothing
4 but the truth.)

5 TESTIMONY OF

6 SUSAN JONES AND DONNA DANIELS

7 called as witness on behalf of the Commission
8 staff, having been first duly sworn, were examined
9 and testified as follows:

10 DIRECT EXAMINATION

11 MS. HOLMES: Sue, why don't you go
12 first. Could you please state your name for the
13 record, and who you work for, and what your
14 involvement with the Sunrise Project is.

15 MS. JONES: My name is Susan Jones. I
16 work for the Fish and Wildlife Service, a federal
17 agency. And I am the staff biologist that's been
18 assigned to the Sunrise Project --

19 MS. HOLMES: Can you restate that?

20 MS. JONES: Okay. My name is Susan
21 Jones. I work for the Fish and Wildlife Service
22 here in Sacramento. I am the staff biologist
23 assigned to the Sunrise Project to write the
24 biological opinion.

25 MS. HOLMES: And Ms. Daniels, could you

1 please state your name for the record, and who you
2 work for, and what your involvement with the
3 Sunrise Project is.

4 MS. DANIELS: My name is Donna Daniels,
5 and I'm an environmental specialist for California
6 Department of Fish and Game. And I'm involved in
7 writing the Sunrise incidental take permit, and
8 also reviewing the CEQA equivalent documents for
9 the project for Fish and Game.

10 MS. HOLMES: Ms. Jones, could you please
11 explain what the status is of the biological
12 opinion and when you expect it to be completed?

13 MS. JONES: Well, the status is it's
14 late. We have missed our deadline, our usual
15 deadline. But it is my highest priority item, and
16 I would expect it to be done in approximately I
17 would guess the end of February.

18 MS. HOLMES: And have you reviewed the
19 testimony of Mr. York?

20 MS. JONES: Yes, I have.

21 MS. HOLMES: And do you believe that the
22 kinds of conditions that would be imposed in your
23 process are similar to the kinds of conditions
24 that he's recommending be imposed?

25 MS. JONES: Yes.

1 MS. HOLMES: And, Ms. Daniels, can you
2 please explain what the status is of the 2081
3 permit on the streambed alteration agreement?

4 MS. DANIELS: The 2081 permit is I do
5 have a draft of that written. It essentially
6 totally parallels what -- what has already been
7 provided in the Energy Commission staff reports,
8 as far as suggested mitigation and mitigation
9 that's been agreed upon by -- by the Applicant.

10 I'm going to -- the final is actually
11 going to parallel what was done format-wise by La
12 Paloma, so that was just recently signed and I
13 need to -- to rewrite it in that format. So
14 that's the current -- currently accepted by our
15 legal department.

16 The streambed agreement will become
17 effective once the project is approved by the
18 Commission. It is -- it's a done deal, once the
19 -- it's all in place and pending approval by the
20 Commission of the project.

21 MS. HOLMES: Those would be the
22 questions I would have of these two people.

23 HEARING OFFICER FAY: Do any of the
24 parties have questions of these representatives?

25 MR. GALATI: Actually, I have a couple

1 of questions.

2 CROSS EXAMINATION

3 MR. GALATI: My first question would be to
4 Ms. Jones. And with respect to Valley Waste
5 ponds, do you -- is it your opinion that the U.S.
6 Fish and Wildlife has the authority to enter the
7 Valley Waste Facility and take any corrective
8 action?

9 Excuse me, let me -- sorry about that.

10 Is it your opinion that the U.S. Fish
11 and Wildlife Service has the authority to enter
12 upon Valley Waste and take any corrective action
13 if they found any threat to migratory birds?

14 MS. POOLE: Objection. Calls for a
15 legal opinion. This witness is not qualified to
16 render a legal opinion.

17 MR. GALATI: She does work for the U.S.
18 Fish and Wildlife Service, and I presume she
19 understands their regulations and authority.

20 HEARING OFFICER FAY: I'm going to
21 overrule the objection and ask the witness if she
22 has any knowledge or experience with the
23 jurisdiction of her agency.

24 MS. JONES: Yeah. My understanding is
25 that our enforcement branch can -- would be able

1 to go to the Valley Waste Facility and enter the
2 facility, and review any problems that might occur
3 for migratory birds or endangered species at the
4 facility.

5 MR. GALATI: And, Ms. Daniels, is it
6 your opinion that the California Department of
7 Fish and Game has the authority to enter and
8 investigate any suspected threat to wildlife due
9 to the Valley Waste ponds?

10 MS. DANIELS: Yes. We could investigate
11 any potential violations of our Fish and Game
12 Code, and that would include migratory birds,
13 endangered species, and pollution -- pollution
14 events.

15 MR. GALATI: And to your knowledge, has
16 Valley Waste ever been investigated by the Fish
17 and Game?

18 MS. DANIELS: I believe they have been
19 investigated, but they have never been prosecuted
20 for any violation.

21 MR. GALATI: And did you review your
22 records to check to see if there were any
23 prosecution?

24 MS. DANIELS: We reviewed them
25 yesterday.

1 MR. GALATI: And you didn't find any?

2 MS. DANIELS: We found none.

3 MR. GALATI: Thank you. No further
4 questions.

5 HEARING OFFICER FAY: Ms. Poole?

6 MS. POOLE: Thank you.

7 CROSS EXAMINATION

8 MS. POOLE: These questions are for Ms.
9 Jones.

10 Your conclusions about this project are
11 not final yet; correct?

12 MS. JONES: That is correct.

13 MS. POOLE: And do you have the final
14 agency authority for your agency for what's
15 included in the biological opinion?

16 MS. JONES: No, I do not.

17 MS. POOLE: There's an internal agency
18 review process for that biological opinion?

19 MS. JONES: There is an official
20 internal review process. I have brought this
21 project through an informal internal review
22 process and reviewed it verbally with the
23 decision-makers that will be looking at it,
24 because I knew that it might be controversial and
25 I wanted to address the problems as they appeared

1 in the workshops.

2 MS. POOLE: The final biological opinion
3 may contain different findings and conclusions
4 than the ones you have reviewed to date; correct?

5 MS. JONES: It's possible.

6 MS. POOLE: If wastewater associated
7 with this project was hazardous and sent to open
8 ponds accessible to wildlife, would that affect
9 your findings and conclusions?

10 MS. JONES: I would confer with our
11 contaminants group, and I think they have quite a
12 bit of experience with waste ponds and bird
13 interactions. My understanding to this point is
14 that our contaminants group does not think that
15 this particular facility is a problem.

16 MS. POOLE: Has the contaminants group
17 done any sampling of the wastewater?

18 MS. JONES: Not that I know of. They
19 haven't been -- not recently, not for this
20 project.

21 MS. POOLE: Has Fish and Wildlife
22 approved the draft Kern County Habitat
23 Conservation Plan?

24 MS. JONES: Kern County Valley Floor
25 HCP, is that --

1 MS. POOLE: Yes.

2 MS. JONES: Our -- my boss has been
3 working on that project over many years, and it's
4 in draft, so we have not approved it. But we've
5 been heavily involved in preparing it.

6 MS. POOLE: So Fish and Wildlife has not
7 yet determined that the Habitat Conservation Plan
8 is adequate to protect listed species and comply
9 with the Endangered Species Act?

10 MS. HOLMES: I'm going to object at this
11 point on relevance grounds. I don't understand
12 what the relevance of this document is to this
13 proceeding. Staff has not relied on that document
14 for purposes of mitigating project impacts.

15 MS. POOLE: The Applicant has discussed
16 that document and has stated in its testimony that
17 compliance with that document will affect the
18 project's impacts.

19 MR. GALATI: If I could recharacterize
20 the testimony, which I'd be glad to have Mr.
21 Vanherwig come up. We are in agreement with staff
22 that staff's proposed conditions of certification,
23 in combination with the -- impede the draft, would
24 mitigate any impacts to us in significant level.

25 MS. POOLE: It's discussed in their

1 testimony.

2 HEARING OFFICER FAY: Why don't you go
3 ahead and answer the question. The objection is
4 overruled.

5 MS. JONES: What was the question?

6 MS. POOLE: The question, again, is has
7 Fish and Wildlife determined that the Kern County
8 Valley Floor Habitat Conservation Plan is adequate
9 to protect listed species or comply with the
10 Endangered Species Act?

11 MS. JONES: We have not made a
12 determination to that effect.

13 MS. POOLE: Is anybody required to
14 follow the recommendations in the draft Kern
15 County Valley Floor HCP?

16 MS. JONES: Not while it's draft. No.

17 MS. POOLE: Does Texaco have a take
18 permit for oil production activities on land that
19 it owns in the Midway Sunset Oil Field?

20 MR. GALATI: I would object. It's
21 beyond the scope of the blueprint for this
22 project.

23 MS. POOLE: Again --

24 MR. GALATI: Not relevant, or reasonably
25 calculated to lead to relevant evidence that would

1 be necessary for this decision to make -- this
2 Commission to make a decision.

3 MS. POOLE: Again, Texaco has stated in
4 its testimony that activities around the project
5 will be subject to consultation and therefore will
6 have less of a cumulative impact.

7 MR. GALATI: Again, the testimony is
8 from Sunrise Cogeneration Power Company, and the
9 testimony related to the specific project and the
10 indirect impacts. She asked what was going on in
11 the Midway Sunset Oil Field and Texaco.

12 MS. POOLE: And that -- those activities
13 are identified in the blueprint as a source of
14 cumulative impacts. My question goes to
15 cumulative impacts.

16 HEARING OFFICER FAY: Well, it does seem
17 that to the extent that it goes to cumulative
18 impacts, that we need to allow it. I'll allow the
19 question.

20 MS. POOLE: Would you like me to repeat
21 the question?

22 MS. JONES: Yeah.

23 MS. POOLE: Does Texaco have a take
24 permit for oil production activities on land that
25 it owns in the Midway Sunset Oil Field?

1 MS. JONES: If it -- I wouldn't know. I
2 guess I'm not that familiar with every single --
3 we have a lot of biological opinions out there,
4 and I don't have a list of all of them.

5 MS. POOLE: To your knowledge --

6 MS. JONES: Larry Saslaw might be able
7 to answer that question. He's here from the BLM.
8 We do have a biological opinion with the BLM,
9 Bureau of Land Management, and they manage a lot
10 of activities in that oil field under that
11 biological opinion. That's the one I'm familiar
12 with.

13 MS. POOLE: I'm asking specifically
14 about land that Texaco owns in the oil field.

15 MS. JONES: I'm not familiar with that.
16 There's two or three other biologists that work in
17 Kern County, and they might know about them. I
18 don't.

19 MS. POOLE: But to your knowledge,
20 there's not a biological opinion for those
21 activities?

22 MR. GALATI: Objection. The witness
23 says she doesn't have any knowledge either way.
24 The question's been asked and answered.

25 HEARING OFFICER FAY: Asked and

1 answered. Move on.

2 MS. POOLE: Is destruction of a burrow
3 occupied by a listed species considered a take by
4 the Fish and Wildlife Service?

5 MS. JONES: Destruction of a burrow --
6 destruction of an occupied burrow is considered
7 take. Destruction of an unoccupied burrow is not
8 necessarily take. My understanding.

9 MS. POOLE: By occupied, you mean it's
10 currently used --

11 MS. JONES: By an endangered species.

12 MS. POOLE: -- by listed species.

13 MS. JONES: Right.

14 MS. POOLE: Thank you.

15 I also have a few questions for Ms.
16 Daniels.

17 Ms. Daniels, will the 2081B permit
18 address impacts caused by oil well drilling and
19 oil well operation?

20 MS. DANIELS: I -- in the area that the
21 steam will be injected, it will.

22 MS. POOLE: You're referring to the
23 three-quarter mile radius around the project?

24 Any take of a fully protected species is
25 illegal; correct?

1 MS. DANIELS: That's correct.

2 MS. POOLE: Is it your conclusion that
3 there is absolutely no possibility of take of
4 bluntnose leopard lizards in the construction and
5 operation of this project?

6 MS. DANIELS: I believe it can be
7 constructed without taking bluntnose leopard
8 lizard.

9 MS. POOLE: But do you believe that
10 there is absolutely no possibility of take of
11 bluntnose leopard lizards?

12 MS. DANIELS: You can never say never.

13 MS. POOLE: So your answer is that there
14 is a possibility?

15 MS. DANIELS: There is a possibility.

16 MS. POOLE: Ms. Daniels, I've just given
17 you a copy of Fish and Wildlife Service's revised
18 recovery plan for the bluntnose leopard lizard.
19 Is that correct?

20 MS. DANIELS: Looks like it. Yes.

21 MS. POOLE: Would you please turn to the
22 tabbed page and read the highlighted portion of
23 that document?

24 MS. DANIELS: Mineral --

25 MR. GALATI: I'd object to relevance.

1 HEARING OFFICER FAY: Offer of proof.

2 Where is this going?

3 MS. POOLE: This -- this document is
4 Fish and Wildlife Service's recovery plan for the
5 bluntnose leopard lizard. It describes impacts
6 and the steps necessary for recovery for this
7 species. And there is a question about whether
8 the species -- whether take of this species will
9 be -- will occur under this project.

10 MR. GALATI: And --

11 MS. POOLE: And this document is
12 relevant to that.

13 MR. GALATI: And with no offense to Ms.
14 Daniels, but we do have a representative of the
15 U.S. Fish and Wildlife Service. Maybe that
16 question should be posed --

17 MS. POOLE: I'm happy to show it to the
18 representative of Fish and Wildlife Service and
19 have her refer to it.

20 HEARING OFFICER FAY: The document is
21 published by who?

22 MS. POOLE: By Fish and Wildlife
23 Service.

24 HEARING OFFICER FAY: Well, it doesn't
25 seem very fair to Ms. Daniels --

1 MS. POOLE: Okay. I'll give it to Ms.
2 Jones.

3 HEARING OFFICER FAY: Yeah. I mean, I
4 -- she's not here to speak for U.S. Fish and
5 Wildlife, whereas Ms. Jones is.

6 MS. JONES: Can I say something about
7 this? I think this plan has been superseded by
8 our upland species recovery plan. Just for the
9 record.

10 COMMISSIONER MOORE: By your what
11 series?

12 MS. JONES: There has been a new
13 recovery plan that was written more recently than
14 this, and it --

15 COMMISSIONER MOORE: It's known as?

16 MS. JONES: The San Joaquin Upland
17 Species Recovery Plan. That's a close
18 approximation. I don't have it here with me.

19 MS. POOLE: Is the impacts discussion in
20 this document no longer valid?

21 MS. JONES: I'm not familiar with this
22 document. I am quite familiar with the Upland
23 Species Recovery Plan, which addresses all of the
24 upland species kind of together, as a
25 comprehensive thing. I -- I have -- I've never

1 seen this.

2 MR. GALATI: Based on that testimony,
3 I'd renew my objection to any line of questioning
4 along this --

5 MS. POOLE: Ms. Daniels did say that she
6 was familiar with this document. Could we go back
7 to --

8 MS. DANIELS: Actually, I --

9 MS. HOLMES: I don't believe she did.

10 MS. POOLE: Oh, I thought she --

11 MS. DANIELS: No.

12 MS. POOLE: -- I thought you meant this
13 one. Okay.

14 MS. DANIELS: All right.

15 MS. POOLE: All right.

16 TESTIMONY OF

17 RICK YORK

18 called as a witness on behalf of the Commission
19 staff, having been previously duly sworn, was
20 examined and testified further as follows:

21 CROSS EXAMINATION

22 BY MS. POOLE:

23 Q Mr. York, can you state today that this
24 project will comply with LORS?

25 A I believe it will.

1 Q But we don't have a biological opinion
2 for this project, do we?

3 A No, we don't.

4 Q So you can't state that this project
5 will comply with federal law?

6 A It's --

7 MR. GALATI: Asked and answered.

8 HEARING OFFICER FAY: I think we have
9 his statement of belief and opinion.

10 MS. POOLE: That's all my questions.
11 Thank you.

12 HEARING OFFICER FAY: Mr. York, just a
13 follow-up, while we're on that point. I note that
14 your conclusion on page 23 of your testimony does
15 say staff cannot recommend approval of the project
16 at this time. Has something happened since you
17 filed the written testimony?

18 MR. YORK: Yes, it has. I've got a
19 better idea of the operation at Valley Waste, and
20 I will need to provide supplemental testimony that
21 will not only change my conclusions, but provide a
22 description of the Valley Waste Facility and
23 address my conclusions that I don't think that
24 birds are being exposed to toxic levels out there,
25 and that there are -- are actually threatened by

1 that facility, given the nature of that facility.

2 HEARING OFFICER FAY: I'm sorry to
3 interrupt. Ms. Holmes.

4 MS. HOLMES: I just had -- I just had
5 one question for Ms. Daniels.

6 TESTIMONY OF

7 DONNA DANIELS

8 called as a witness on behalf of the Commission
9 staff, having been previously duly sworn, was
10 examined and testified further as follows:

11 REDIRECT EXAMINATION

12 BY MS. HOLMES:

13 Q In response to a question from CURE, you
14 stated that it is possible that a take of a
15 bluntnose leopard lizard could occur as a result
16 of the construction of this project. Do you
17 recollect that question?

18 A Uh-huh.

19 Q Wouldn't that statement be true for
20 virtually any development project where a
21 bluntnose leopard lizard lives?

22 A Yes.

23 MS. HOLMES: Thank you.

24 HEARING OFFICER FAY: Any further
25 redirect of your witnesses?

1 MS. HOLMES: No, I don't think so.

2 HEARING OFFICER FAY: And has Mr. York
3 covered all his testimony on biology?

4 MS. HOLMES: I believe he has.

5 HEARING OFFICER FAY: Okay.

6 MS. POOLE: Mr. Fay, there's a
7 discussion here today of Valley Waste which
8 differs from staff's discussion in their written
9 testimony. We need to have an opportunity to
10 respond to that. Will that be provided to us?

11 MS. HOLMES: We should go off the
12 record.

13 HEARING OFFICER FAY: Sure. Let's go
14 off the record for a minute.

15 (Off the record.)

16 MS. HOLMES: Mr. Fay, at this time do
17 you -- do you wish to have Mr. York more fully
18 explain the summary that he gave earlier this
19 morning on the issue of Valley Waste?

20 HEARING OFFICER FAY: If you feel you
21 need to do that, please do so. I'm not asking you
22 to file something in writing, because of the risk
23 that there might be actual or perceived
24 differences and cause further confusion. So I
25 think we'll deal with what we've heard. If you'd

1 like to clarify that, that's fine. And, of
2 course, we'll give folks a chance to further cross
3 examine you on that.

4 MR. YORK: I think what I'd like to go
5 through is something that actually I did not get a
6 chance to complete, and that was sort of my
7 rationale for why I think Valley Waste, the ponds
8 are not a threat to birds. And I did not get a
9 chance to finish that. So can I go over that
10 again? Would that help?

11 HEARING OFFICER FAY: Yes. And just so
12 that we can all understand, is it true that you
13 were at one time considering whether or not nets
14 would be required to be placed over these ponds to
15 protect the birds from the ponds?

16 MR. YORK: Yes. The issue of whether or
17 not netting would help the situation out there has
18 been discussed.

19 HEARING OFFICER FAY: Okay. And --

20 MS. POOLE: I'm sorry. What did you say
21 about that issue?

22 MR. YORK: That the issue of possibly
23 netting one or more of the ponds has been
24 discussed.

25 HEARING OFFICER FAY: As a mitigation

1 measure, if -- if it was needed.

2 MR. YORK: Yes. I discussed --

3 HEARING OFFICER FAY: To prevent the
4 birds from --

5 MR. YORK: -- that wish my counterparts
6 at the Fish and Wildlife Service and Fish and
7 Game.

8 Okay. Sort of my summary of the ponds
9 themselves. The ponds are -- the six ponds that
10 are possible problems are all steep sided and deep
11 ponds. And so the very physical nature of these
12 deep ponds and the steep side makes it very
13 unlikely that -- or very minimal use by wading
14 birds in those -- in those ponds.

15 The combined surface area of those six
16 ponds is approximately one-third of an acre total,
17 for those six ponds. So relatively quite a small
18 area total.

19 The high benzene level that was
20 mentioned by CURE at the first pond is where you
21 would expect high readings to be for certain
22 constituents. The six ponds, as the material is
23 pumped from one pond to the other, the data from
24 the annual monitoring that's done by the Regional
25 Water Quality Control Board shows, among other

1 things, the benzene level going down. And at pond
2 six, it's well below what's considered hazardous.

3 So these small steep sided, deep ponds
4 that receive regular visits by, among other
5 things, vacuum trucks to vacuum up the oil and
6 grease that's on top of the ponds, they would
7 suggest to me that the bird usage of these ponds
8 would be expected to be very, very minimal, due to
9 the all the activity and the size and the nature
10 of these ponds.

11 The Valley Waste Facility is
12 periodically visited by CDFG, the Department of
13 Fish and Game, and the Division of Oil and Gas and
14 Geothermal Resources. As Ms. Daniels indicated,
15 she knows of no CDFG violations. The CDF people
16 -- CDFG people who would be visiting them would be
17 the wardens.

18 As far as the Fish and Wildlife Service,
19 what was mentioned earlier today was copies of two
20 letters we got from Valley Waste. It's regarding
21 a 1997 planned visit by the Fish and Wildlife
22 Service to look for facilities such as Valley
23 Waste, and other oil field related waste
24 facilities, in places that has sumps and that sort
25 of things exposed. They announced to the various

1 agencies down there that they were intending to do
2 these inspections, and Valley Waste was one of the
3 facilities that was possibly going to be
4 inspected.

5 I'm not sure if it actually was
6 inspected, but they did receive a copy of -- of
7 these letters, and they did learn that there were
8 four facilities in the region that were cited.
9 Valley Waste was not a facility that was cited by
10 the Fish and Wildlife Service as a problem
11 facility to migratory birds. And that's what was
12 docketed this morning. In their case, they felt
13 that no news was good news, as far as their
14 facility was concerned.

15 In conclusion, I found there to be no
16 evidence of problems at Valley Waste. An
17 additional waste stream as a result of the Sunrise
18 Project should not result in any impacts, and that
19 no additional mitigation is required at this time.

20 HEARING OFFICER FAY: Thank you.

21 All right. Are there further questions
22 for Mr. York, in light of this clarification?

23 MR. GALATI: No further questions.

24 HEARING OFFICER FAY: All right. Ms.
25 Poole.

1 REXCROSS EXAMINATION

2 BY MS. POOLE:

3 Q Mr. York, have you visited the Buena
4 Vista Two facility site to examine the ponds?

5 A No, I have not.

6 Q Do you know whether birds or wildlife
7 use these ponds?

8 A I do not have evidence that they do or
9 do not. No.

10 Q Do wildlife have access to these ponds?

11 A I believe they might.

12 MS. POOLE: That's all the questions I
13 have.

14 HEARING OFFICER FAY: All right. Ms.
15 Holmes?

16 MS. HOLMES: No further questions.

17 HEARING OFFICER FAY: Mr. York, just
18 following up on this last. The basis for your
19 increased comfort level, if I may put it that way,
20 about the ponds, is that solely based on your
21 conversation with Valley Waste?

22 MR. YORK: Valley Waste, and
23 conversations with Fish and Game and Fish and
24 Wildlife Service.

25 HEARING OFFICER FAY: Right. So the

1 regulatory agencies, as well as the owner of the
2 ponds?

3 MR. YORK: Yes.

4 HEARING OFFICER FAY: Okay.

5 MR. YORK: I was looking for a history
6 with either of those agencies as to a history of
7 problems.

8 HEARING OFFICER FAY: I have some
9 general questions. On page seven of your
10 testimony, you talk about impacts from -- possible
11 impacts from the transmission routes, and that
12 they will cross, I believe, the Lokern Preserve
13 and -- the Lokern Ecological Reserve. Does the
14 record indicate that permission has been granted
15 from both those groups, and that the transmission
16 line, if it uses that route, is compatible with
17 the primary use of those preserves and natural
18 areas?

19 MR. YORK: I believe that a land
20 exchange has taken place down there, so that the
21 original Fish and Game Ecological Reserve, which
22 was originally, would be in the line of fire of
23 this and other new transmission lines. The land
24 swap has occurred so that that parcel that was the
25 original CDFG Ecological Reserve is now actually

1 part of the Lokern Preserve, which is managed by
2 the Center of Natural Lands Management, and they
3 are allowing access to their property. Of course,
4 they're looking for adequate compensation, but
5 they will allow access for construction and
6 maintenance of those facilities.

7 HEARING OFFICER FAY: Okay. Just put
8 the Applicant on notice that the statute requires
9 that the Commission affirmatively find that
10 permission has been granted by any natural area
11 for any portion of the facility. So the record
12 has to include that.

13 MR. GALATI: Right, and I'll -- we
14 haven't brought up our panel yet. We might be
15 able to address that.

16 HEARING OFFICER FAY: Okay. That's
17 fine.

18 On page 11 of your testimony, you
19 discuss the indirect impacts from the 700 wells.
20 Have the mitigation measures that you've proposed
21 taken into account the possibility that this
22 drilling activity could go on for many years?

23 MR. YORK: Yes, I would expect the new
24 wells to be built over a period of years.

25 HEARING OFFICER FAY: So you were not

1 treating this as a -- as a short term impact in
2 terms of designing your mitigation plan; is that
3 correct?

4 MR. YORK: Well, I would expect the
5 impacts to occur over a period of years, and I
6 focused on the habitat loss issue, which is what I
7 felt was the primary thing to focus upon.

8 HEARING OFFICER FAY: Okay. And what is
9 the primary mitigation for the drilling activity?

10 MR. YORK: For the loss of habitat for
11 the indirect effects of this project, is habitat
12 compensation.

13 HEARING OFFICER FAY: Okay.

14 MR. YORK: There actually is a second
15 part to that. There will be Texaco California
16 International, will be hiring a second designated
17 biologist. The Applicant will have one, TCI will
18 have one, also. That biologist will have to pass
19 the same scrutiny that the Applicant's designated
20 biologist will, and that second biologist will be
21 TCI's person who will make certain that primarily
22 the kit fox is not impacted. In other words, that
23 the surveys will be done prior to that development
24 of those -- any of those wells and new roads, that
25 sort of thing.

1 They will need to do clearance surveys
2 in advance of that development. And I would
3 expect, as I said earlier, that since that will
4 occur over several years, no doubt, that that
5 biologist will need to be available over a several
6 year period to make sure that those clearance
7 surveys are completed.

8 HEARING OFFICER FAY: Okay. Thank you.
9 And if you could turn to page 14 of your
10 testimony. You did not indicate any corrections,
11 and I'm not trying to pin -- embarrass you in any
12 way, but I just want to get a clarification here.

13 At the beginning of the first whole
14 paragraph, is there some verb needed after Dr.
15 Charleton's name?

16 MR. YORK: A verb is needed, and it's
17 the word "completed".

18 HEARING OFFICER FAY: So that would be a
19 correction to that testimony?

20 MR. YORK: That would be a correction.
21 Actually, I have a second one on that page.
22 Sorry.

23 In the third paragraph, starting with
24 the Energy Commission, the first word on the
25 second sentence should not be "this". It should

1 be the word "one".

2 HEARING OFFICER FAY: The word --

3 MR. YORK: One. One study. There were
4 a number of studies. Excuse me. There were a
5 number of studies that were completed.

6 HEARING OFFICER FAY: All right. And
7 regarding those studies that you say did not
8 appear -- that more field activities did not
9 appear to affect kit fox survivorship or
10 reproduction, do you have any professional opinion
11 on -- on why that might be the case?

12 MR. YORK: I would like to pass that
13 question on to Linda Spiegel, since she was the
14 author of the paper. If I may.

15 HEARING OFFICER FAY: Ms. Spiegel. Did
16 you hear the question, Ms. Spiegel?

17 MS. SPIEGEL: Could you repeat it?

18 HEARING OFFICER FAY: It just seems
19 interesting that -- that the kit fox in the oil
20 field, according to the statement, the study
21 showed that those oil field activities did not
22 appear to affect kit fox survivorship or
23 reproduction. Do you agree with the statement,
24 and if so, do you have a professional opinion why
25 -- why that might be the case?

1 MS. SPIEGEL: I agree with the
2 statement. Why? No, not really.

3 HEARING OFFICER FAY: All right.

4 MS. SPIEGEL: You know, I'm not sure I
5 understood your question, why it would appear to
6 be the case. I mean, we looked at all these
7 parameters, and we look at the statistics we get,
8 and it says that there's no significant
9 difference. And I think you start making
10 inferences mostly when there -- when there are
11 significant differences.

12 But to -- to say, you know, why there
13 isn't basically is because oil development, for
14 some reason, is not -- it's not affecting them
15 directly.

16 HEARING OFFICER FAY: At least not their
17 survivorship or reproduction. Is that --

18 MS. SPIEGEL: Or a lot of other
19 parameters we looked at, actually.

20 HEARING OFFICER FAY: Really.

21 MS. SPIEGEL: Diet, home range, den --
22 denning behaviors.

23 COMMISSIONER MOORE: How do you look at
24 diet?

25 MS. SPIEGEL: Well, we collect their

1 scats, and we look at the prey remains found in
2 front of the dens. And we collect those, and we
3 have a professional person look to see what's
4 inside of those and make a comparison.

5 HEARING OFFICER FAY: And, Mr. York,
6 turning to page 16, I believe in the third
7 paragraph, where you say once this information is
8 provided, and I think that refers to the analysis
9 of the water, of the produced water; is that
10 correct?

11 MR. YORK: Yes. Yes, that's the case.

12 HEARING OFFICER FAY: And we're sort of
13 left not knowing whether or not mitigation would
14 be required, and whether there would be an
15 additional condition of certification proposed.
16 Is that -- has that changed now, in your opinion?

17 MR. YORK: I --

18 HEARING OFFICER FAY: Or have you had an
19 opportunity --

20 MR. YORK: -- at this time do not feel
21 that additional condition would be necessary.

22 HEARING OFFICER FAY: Have you had an
23 opportunity to look at results, in terms of the
24 water analysis?

25 MR. YORK: Yes. Yes, I have. And

1 combined with my understanding now of the
2 operations of the Valley Waste Facility, I at this
3 time do not feel a need for an additional
4 condition.

5 HEARING OFFICER FAY: All right.

6 MR. YORK: Just to add to that, if there
7 was a need to be careful, I suppose if I did add
8 another condition it would be that one or more of
9 the six ponds at Valley Waste be netted, just to
10 be prudent. But I'm not willing to state that --
11 that that's what I would actually do.

12 Only I want to mention that because it
13 has actually been discussed.

14 HEARING OFFICER FAY: So that is a
15 reasonable mitigation measure, potential
16 mitigation measure.

17 MR. YORK: Potential, yes.

18 HEARING OFFICER FAY: And is there -- is
19 there a triggering mechanism that if, at some
20 later time, the ponds were found to endanger
21 wildlife, that could be imposed?

22 MR. YORK: Yes. That would require some
23 monitoring of some sort to gather that
24 information, and at this time I'm not proposing
25 that be done, either.

1 HEARING OFFICER FAY: Let me ask you, on
2 page 19, down near the bottom, just above the
3 bluntnose leopard lizard heading. You refer to
4 the expectation of landscaping suitable for
5 wildlife species. If there is no landscaping for
6 the project, does that affect your analysis at
7 all?

8 MR. YORK: I was not aware that the
9 landscape plan had gone away, so --

10 HEARING OFFICER FAY: But we are
11 informed, and I understand staff will introduce
12 some --

13 COMMISSIONER MOORE: Who recommended
14 that it go away? It hasn't gone away.

15 HEARING OFFICER FAY: That's right.
16 Apparently the county is -- is no longer requiring
17 it. Whether or not the condition will still be
18 imposed -- but I just want to ask you, if there
19 were no landscaping the project, does that affect
20 your analysis?

21 MR. YORK: Not at all. If the landscape
22 plan went away it would not affect my opinion
23 about this project.

24 HEARING OFFICER FAY: All right. Thank
25 you very much.

1 COMMISSIONER MOORE: Well, I have a
2 question.

3 Mr. York, in your remarks earlier, just
4 in the overview of the biological resources
5 section, it indicates -- I don't know whether this
6 is boilerplate language or not, but it indicates
7 analysis based in part upon information provided
8 in Sunrise application, workshops, staff data
9 requests, and Applicant responses, site visits and
10 discussions with various agency representatives.

11 Did you make one or more site visits to
12 this site?

13 MR. YORK: I've been -- I think I
14 visited the project site on three occasions, and
15 we also visited the Lokern Preserve during one of
16 those site visits, and we visited the proposed T-
17 line corridor.

18 COMMISSIONER MOORE: And so --

19 MR. YORK: All with -- all with
20 agencies' representatives present, and CURE, as
21 well.

22 COMMISSIONER MOORE: And typically, when
23 you do that, you make a transect across the
24 property, some -- some sort of systematic
25 examination of the property?

1 MR. YORK: The -- the biological surveys
2 that are done do that. They have survey protocols
3 that are in our regulations that --

4 COMMISSIONER MOORE: And so you're in a
5 position to see the nature of the transects that
6 are made by the biological consultants, in other
7 words, to understand the area, the territory that
8 they -- they go through.

9 MR. YORK: Their methods are explained
10 in their application, and also in their biological
11 assessment. Yes, I look at those -- at those
12 protocols that they follow.

13 COMMISSIONER MOORE: You were asked a
14 question earlier about the Buena Vista Reservoir,
15 and I want to understand the significance of your
16 answer, which -- which you said you did not visit
17 that site. And first, is there a reason that you
18 didn't visit that site, in particular?

19 MR. YORK: No reason.

20 COMMISSIONER MOORE: Do you know enough
21 about that site to say whether or not it is
22 similar or not to anything else you did visit?

23 MR. YORK: I -- I have not visited
24 anything similar.

25 COMMISSIONER MOORE: So --

1 MR. YORK: What I -- what I am familiar
2 with is evaporation ponds that have been designed
3 for the Luz facilities, which I have seen, out in
4 the Mojave Desert, and the overall design of that
5 facility, I was told yesterday, were similar to
6 what I would expect to be used at these
7 facilities, these evaporation ponds out in the
8 Mojave Desert; steep sides, deep water, that sort
9 of thing. And they are designed that way to
10 minimize bird usage of those evaporation ponds.

11 COMMISSIONER MOORE: And who -- who told
12 you that -- that -- who gave you that information
13 yesterday?

14 MR. YORK: Larry Bright. He's the
15 manager of Valley Waste. He gave me a -- a very
16 good description of the operations of the
17 facility.

18 COMMISSIONER MOORE: Remind me how far
19 that facility is from this site? In round
20 numbers.

21 MR. YORK: I'm not sure how far it is
22 away.

23 COMMISSIONER MOORE: Does anyone -- can
24 anyone help me with that? Come on up and identify
25 yourself, please. I just want to get a --

1 MR. GALATI: We can address that in
2 direct, as well. We haven't put on our witness in
3 direct.

4 COMMISSIONER MOORE: Oh, that's right.
5 It'll come up.

6 MR. GALATI: If that would be helpful.

7 COMMISSIONER MOORE: That's fine.

8 HEARING OFFICER FAY: I'm sorry. I just
9 have -- I just have two more.

10 Mr. York, if, for whatever reason --
11 Rick, if, for whatever reason, you felt that some
12 mitigation at the ponds was necessary, I just want
13 to understand how -- how you would conceive of
14 that. Would you -- would that be to mitigate an
15 indirect impact of the project, in your opinion?

16 MR. YORK: I believe I would put it
17 under indirect. Yes.

18 HEARING OFFICER FAY: And --

19 MR. YORK: Because it's part of the
20 development of the 700 new wells and the use of
21 the produced water for steam, so I would, for
22 simplicity, for me to understand it, I would put
23 it under as an indirect effect of the project.

24 HEARING OFFICER FAY: And would that
25 only be necessary to prevent a significant impact?

1 MR. YORK: Yes.

2 HEARING OFFICE FAY: And -- last
3 question. The Applicant indicated that they
4 disagree in only one area with your testimony.
5 That is the -- your suggestion under the protocol,
6 Bio-1, for a 500 foot buffer around the various
7 facilities.

8 Is that -- is that still the case? Do
9 you still have that disagreement with the
10 Applicant?

11 MR. YORK: Actually, I wouldn't
12 characterize it as a disagreement. What I have
13 done in Bio-1 is memorialize what they originally
14 proposed to do as far as their mitigation. I
15 wanted to get that in a condition someplace. With
16 the full understanding that some of these things
17 that they have proposed to do may be changed as we
18 discuss the various avoidance distances, in this
19 case, or other things, that they would be adjusted
20 based upon our discussions with the Fish and
21 Wildlife Service and Fish and Game, and as they
22 receive the biological opinion in their incidental
23 take permit.

24 So I, at this time, that -- that
25 distance really is not important, other than it's

1 -- it's there. This is what they said they would
2 want to do. I have a feeling that the agencies
3 are going to say that's -- that's too much, and
4 that they will be paring that down. But that --
5 that distance will be adjusted, and will then be
6 incorporated into their mitigation and monitoring
7 plan.

8 HEARING OFFICER FAY: Let me ask counsel
9 a question, then.

10 My understanding is that the conditions
11 are sacrosanct word at the Commission, and that
12 the verifications are subject to adjustment.
13 Where does the protocol fit in? Mr. York just
14 described something that he thinks is subject to
15 change. Is the protocol like a condition, or is
16 it more like a verification?

17 MS. HOLMES: Well, typically what we do
18 in this area is we have them present their draft
19 BRMIMP, and we work with them to develop it during
20 the siting process. But sometimes the final
21 arrangement for the specific mitigation measures
22 that are included are not resolved until after the
23 evidentiary hearings.

24 HEARING OFFICER FAY: And so my question
25 is, what is -- what is the degree of binding-ness

1 -- binding nature of the protocol versus
2 condition? What has to happen to make that 500
3 change to some other number?

4 MS. HOLMES: I honestly don't -- I know
5 that those numbers have changed, and I honestly
6 don't know what process the Commission has used.
7 I don't know if they've gone through a formal
8 amendment process or the expedited amendment
9 process. I honestly don't know how they --

10 COMMISSIONER MOORE: Another way to say
11 that is let's say that there is a Presiding
12 Member's proposed decision that comes out and
13 memorializes this recommendation. As far as I'm
14 concerned, at that point that condition is law.
15 So as far as I'm concerned, before I put my
16 signature to it, it's going to be negotiated in
17 this room or with my attorney, and -- and other
18 parties.

19 But once I've set my signature to it, I
20 assume it's law. If I'm mistaken, then I -- I'd
21 like to be informed, because that's -- for me,
22 that would be the end of it, and as a consequence
23 if there's an adjudication I assume it occurs
24 today, or in this process.

25 MS. HOLMES: If you would like me to

1 find out how we've handled changes to the
2 protocol, I can consult with the Compliance Unit
3 and let you know after lunch.

4 HEARING OFFICER FAY: Yeah. If the
5 answer is that easy. Otherwise, we need that
6 briefed by the staff.

7 MS. HOLMES: Okay.

8 HEARING OFFICER FAY: We need to be very
9 clear when the committee recommends on the
10 assumption that the Commission will adopt, is this
11 something definite that would require the formal
12 amendment procedure to change, or is it like a
13 verification, where staff has the flexibility to
14 make some adjustments, as long as -- in the spirit
15 of the condition.

16 MS. HOLMES: Okay.

17 MR. GALATI: Mr. Fay, if we can weigh in
18 on this. We intend to comply with the protocol as
19 if it were a condition. We would like to explore
20 the possibility of whether or not Mr. York agrees
21 with the proposed change that we have. And if
22 that would be appropriate now, I think you asked
23 him if he agreed, and I think he -- his answer
24 was that that'll be worked out. And so I'd like
25 to know if he has an opinion now.

1 HEARING OFFICER FAY: Well, if it can be
2 worked out and defined, now is the time and place.
3 If it can't be, and I think it should have a range
4 indicating that, you know, what's going on. But
5 we just -- the committee needs to understand what
6 this heading protocol means in staff's mind, so
7 that we don't have a misunderstanding down the
8 line where the Applicant thinks it's something
9 that if the agencies agree, no problem, and the
10 Commission thinks that no, it needs a formal
11 amendment process to change. Just wanted to get
12 that clear.

13 MR. YORK: We can definitely work this
14 out, and it can be made here in my testimony, a
15 change made to it. We've got the various parties
16 here today that could discuss this with the
17 Applicant, and -- and utilize the -- their most
18 recent recommendation as far as the avoidance
19 distance.

20 COMMISSIONER MOORE: I don't have
21 anymore questions.

22 MS. POOLE: I do have a few recross
23 based on your questions.

24 HEARING OFFICER FAY: Well, we don't
25 have recross based on our questions. You can

1 recross based on the --

2 MS. HOLMES: You can ask recross from my
3 questions. But I would object to recross
4 questions from the committee.

5 HEARING OFFICER FAY: -- based on the
6 staff counsel's questions. No, I'm sorry, that's
7 not available.

8 Are you suggesting this, Mr. York, that
9 you want to caucus and come back with a
10 recommendation, perhaps after lunch?

11 MR. YORK: Yes. I think that's fine.

12 HEARING OFFICER FAY: Okay. Mr.
13 Grattan.

14 MR. GRATTAN: Can we have a -- the
15 Applicant, for one, is willing to consider the
16 protocol as part of the Commission conditions.

17 COMMISSIONER MOORE: Mr. Galati made
18 that clear.

19 MR. GRATTAN: However it comes out.
20 However it comes out. We do want to debate what's
21 in the protocol, and we do want the opportunity to
22 brief it. But when the Commission gavel comes
23 down, that's a condition as far as we're
24 concerned.

25 COMMISSIONER MOORE: He made that clear.

1 MR. GRATTAN: Okay.

2 COMMISSIONER MOORE: All right. We're
3 at a good break point. Let's take ten minutes,
4 and we'll come back here at 11:00 o'clock.

5 (Thereupon, a recess was taken.)

6 HEARING OFFICER FAY: Okay. Ms. Holmes,
7 two questions. Do you have any redirect of your
8 witness, and is there anything further that your
9 witness wants to add?

10 MS. HOLMES: Well, I just wanted to let
11 you know that I did check during the break with
12 the attorney who used to handle compliance matters
13 for the Commission for many years, Mr. Ogata, and
14 he informs me that protocols are conditions, and
15 they cannot be changed without a Commission
16 decision. So Commissioner Moore's assessment was
17 correct.

18 And secondly, I believe that during the
19 break staff's witness had an opportunity to
20 consult with some of the other people in the room
21 here today to discuss the particular part of the
22 protocol that's at issue, and has additional
23 testimony to offer on that topic.

24 HEARING OFFICER FAY: Go ahead, Mr.
25 York.

1 MR. YORK: Shall I read this into the
2 record? It deals with Protocol Number 2. It
3 should read, no more than 14 days prior to
4 commencement of construction activities a
5 qualified biologist will conduct pre-activity
6 surveys of proposed work zones for the power
7 plant, natural gas pipelines, water pipeline and
8 transmission line, and the buffers around each
9 area will be specie specific and correspond to
10 avoidance buffers mandated by the biological
11 opinion. That's the federal biological opinion.

12 HEARING OFFICER FAY: Could you read
13 that again for us?

14 MS. HOLMES: Could you clarify where you
15 are?

16 MR. YORK: Page 24.

17 HEARING OFFICER FAY: Is this Bio-1,
18 page 24 of your testimony?

19 MR. YORK: Protocol Number 2.

20 HEARING OFFICER FAY: Protocol Number 2.

21 MR. YORK: Read the whole thing again?

22 HEARING OFFICER FAY: Why don't you
23 explain what will be struck, and what will be
24 added.

25 MR. YORK: What will be struck would be

1 500 foot, and the phrase, "will be specie specific
2 and correspond to avoidance buffers mandated the
3 biological opinion" will be put at the end of that
4 sentence, after the word "area".

5 HEARING OFFICER FAY: All right. Thank
6 you. Everybody got that?

7 Anything further, Ms. Holmes?

8 MS. HOLMES: No.

9 HEARING OFFICER FAY: Okay. That
10 concludes the staff's presentation on Biological
11 Resources.

12 Mr. Galati, is the Applicant ready?

13 MR. GALATI: Yes, the Applicant is
14 ready. We'd like to call Mr. Bill Vanherwig.

15 HEARING OFFICER FAY: Please swear the
16 witness.

17 (Thereupon, William J. Vanherwig was,
18 ny the court reporter, sworn to tell
19 the truth and nothing but the truth.)

20 TESTIMONY OF

21 WILLIAM J. VANHERWIG

22 called as a witness on behalf of the Applicant,
23 having been first duly sworn, was examined and
24 testified as follows:

25 ///

1 DIRECT EXAMINATION

2 BY MR. GALATI:

3 Q Mr. Vanherwig, will you please give your
4 name, address, and current employment?

5 A My name is William J. Vanherwig. I
6 reside at 332 North Stein Road in Bakersfield,
7 California. I am currently a self-employed
8 biological consultant.

9 Q Have you prepared and previously
10 submitted written testimony in this AFC
11 proceeding?

12 A Yes, I have.

13 Q And are you sponsoring any exhibits at
14 this hearing?

15 A Yes, I'm -- I am sponsoring Exhibit 1,
16 AFC and Revisions, Sections B.2, and Appendix C of
17 the Biological Assessment.

18 Exhibit 2, Transmission Supplement to
19 Section 3.2.

20 Exhibit 5, Responses to CEC Data
21 Requests, responses 12 through 18, and workshop
22 June 14th, 1999.

23 Exhibit 6, Responses to CURE Data
24 Requests, responses 34 through 37A, 38 through
25 39A, 40A, 41A, 42A, 44, 45, 47, 50D, 50E, 50F, and

1 50H.

2 (Inaudible asides.)

3 THE WITNESS: Exhibit 7, Sunrise
4 Comments on PSA, pages 66 through 75.

5 MR. GALATI: Mr. Fay, I need to now ask
6 you to mark for identification a few exhibits.

7 The first one I'd like you to mark is
8 the -- for identification, it's the Application
9 for Transportation and Utility Systems and
10 Facilities on Federal Lands.

11 (Inaudible asides.)

12 MR. GALATI: This document was docketed
13 separately from the AFC, and I'll get a docket
14 date. The -- let me bring that, get a copy of
15 that and bring that up to you. I don't have a
16 copy of that with me.

17 HEARING OFFICER FAY: That would be --
18 okay.

19 MR. GALATI: Let me go to the ones that
20 I do have a copy of.

21 HEARING OFFICER FAY: Let me indicate
22 that that will be Exhibit 68.

23 (Thereupon, Exhibit 68 was marked
24 for identification.)

25 MR. GALATI: Yes. I also have -- the

1 next exhibit to be marked is the Revised Draft
2 Biological Resources Mitigation Implementation and
3 Monitoring Plan, BRMIMP. That's dated November
4 30th, 1999. And I will get a docket date for you
5 in just a moment. If that can be marked.

6 HEARING OFFICER FAY: That's Exhibit 69.
7 (Thereupon, Exhibit 69 was marked
8 for identification.)

9 MR. GALATI: Also marked for
10 identification the CESA, California Endangered
11 Species Act, Section 2081B, permit application.
12 I'll get a docket date for you.

13 HEARING OFFICER FAY: That's Exhibit 70.
14 (Thereupon, Exhibit 70 was marked
15 for identification.)

16 MR. GALATI: And a letter from W.E.
17 Loudermilk, L-o-u-d-e-r-m-i-l-k, from the
18 Department of Fish and Game, to Marc Pryor, dated
19 December 7th, 1999, and docketed on December 14th,
20 1999.

21 HEARING OFFICER FAY: That's Exhibit 71.
22 (Thereupon, Exhibit 71 was marked
23 for identification.)

24 BY MR. GALATI:

25 Q Mr. Vanherwig, those exhibits marked for

1 identification, 68 through 71, are you sponsoring
2 those, as well?

3 A Yes, I am.

4 Q Can you affirm your previous written
5 testimony under oath today?

6 A Yes, I can.

7 Q With respect to what you heard staff's
8 modification to Protocol Number 1 of Bio-1, do you
9 have any corrections or modifications to your
10 previously written testimony?

11 A Yes, I would like to withdraw my
12 disagreement and concur with staff.

13 Q And would you please, very --

14 HEARING OFFICER FAY: Be more specific.

15 Where --

16 THE WITNESS: With what he mentioned as
17 that the survey widths would be -- would be specie
18 specific, and correspond to buffer zone avoidance
19 areas that would be mandated by the U.S. Fish and
20 Wildlife Service Biological Opinion.

21 HEARING OFFICER FAY: Thank you.

22 BY MR. GALATI:

23 Q Would you please very briefly summarize
24 your testimony?

25 A My role in the permitting process for

1 the Sunrise Project was to assess impacts to
2 biological resources that -- for both preferred
3 and alternate sites, for the project site itself,
4 for utility corridors that would lead into the
5 project site, and also for a transmission line.
6 Several different preferred and alternate routes
7 were looked at.

8 I'm in basic agreement with -- we did
9 find several places where the project may impact
10 listed species and other biological resources.
11 I'm in agreement with the staff assessment, and as
12 I stated earlier, I have no -- I concur with the
13 new -- new condition for survey width corridors.

14 Q And do you have an opinion of whether
15 the project will have a significant impact on the
16 environment?

17 A I think that the mitigation measures
18 that have been proposed by staff and our -- our
19 BRMIMP, and also mitigation measures that will be
20 mandated by the U.S. Fish and Wildlife Service and
21 the California Department of Fish and Game, will
22 reduce all impacts of this project, potential
23 impacts to a less than significant level and will
24 have basically, no impact.

25 Q Does that also include the conditions of

1 certification proposed by staff?

2 A Yes.

3 Q And do you have an opinion of whether
4 this project will comply with LORS?

5 A Yes, it will comply with all laws,
6 ordinances, regulations and standards.

7 Q Does that conclude your testimony?

8 A Yes, it does.

9 Q You heard the testimony of staff today
10 regarding the Valley Waste ponds; is that correct?

11 A Yes, I did.

12 Q And do you have any comments on that
13 testimony?

14 A Yes. I've have actually -- I have
15 visited the site of the Valley Waste ponds, and
16 Mr. York had mentioned that they were very deep,
17 small ponds. I wasn't able to see the water
18 because the levees are very high, and that would
19 be consistent with a very deep pond. The levees
20 were well above my -- my vehicle's top, which
21 would be probably close to -- I would -- I would
22 estimate seven feet in height. So that would be
23 consistent to a very deep, deep pond.

24 I wasn't able to see the ponds, so I
25 wasn't able to quantify the number of ponds or

1 observe any birds on water. I did not observe any
2 water birds flying over the ponds. The time of my
3 visit would correspond to when migrating water
4 fowl and other water birds would be in the
5 southern part of the San Joaquin Valley, however.

6 MR. GALATI: I have no further
7 questions. Mr. Vanherwig is available for cross
8 examination.

9 HEARING OFFICER FAY: Would you like to
10 move his testimony and Exhibits 68 through 71?

11 MR. GALATI: Yes, I would like to move
12 those in at this time.

13 HEARING OFFICER FAY: Any objection?

14 All right, so moved.

15 (Thereupon, Exhibits 68, 69, 70, and 71
16 were received into evidence.)

17 HEARING OFFICER FAY: Staff.

18 MS. HOLMES: I have one question.

19 CROSS EXAMINATION

20 BY MS. HOLMES:

21 Q Mr. Vanherwig, do you know whether
22 Sunrise will employ the current best management
23 practices as promulgated by Fish and Game and Fish
24 and Wildlife Service to avoid take of the
25 bluntnose leopard lizard?

1 A Sunrise, yes. I --

2 Q Yes?

3 A -- I do. I do believe that they intend
4 to do so.

5 MS. HOLMES: Thank you.

6 HEARING OFFICER FAY: Ms. Poole.

7 CROSS EXAMINATION

8 BY MS. POOLE:

9 Q What was the date of your visit to
10 Valley Waste ponds?

11 A I'd have to confer with my --

12 Q Can you tell me approximately?

13 A It was in the first part of December, I
14 believe. First part of December, or maybe the
15 first part of November.

16 Q First part of November or last part of

17 --

18 A The last part of November, first part of
19 December.

20 Q On pages 11 and 12 of your testimony you
21 state that Dr. Hermano holds all the necessary
22 permits to capture and hold bluntnose leopard
23 lizards.

24 A Yes.

25 Q What are those permits?

1 A He has permits issued by the California
2 Department of Fish and Game and U.S. Fish and
3 Wildlife Service.

4 Q Can you tell me specifically what the
5 permits --

6 A For -- they're scientific -- they're
7 under a different section than 10-1A. Scientific
8 research. I also hold permits to capture and
9 release certain species of kangaroo rats. And I
10 couldn't tell you the specific section, but it's
11 -- scientific research, I believe, or scientific -
12 - no, scientific research permit. It's a portion
13 of the Endangered Species Act. And -- and with
14 Fish and Game, they issue memorandums of
15 understanding.

16 Q And that MOU is also for scientific
17 research?

18 A Yes.

19 MS. POOLE: Thank you.

20 COMMISSIONER ROHY: Excuse me, could I
21 clarify that? Is that an MOU, is that the same as
22 the take permit? I was trying to figure out what
23 you --

24 THE WITNESS: No, it's not -- it's not
25 really a take. It's a memorandum of understanding

1 --

2 COMMISSIONER ROHY: Rather than a take
3 permit.

4 THE WITNESS: Yes. It's not considered
5 to be a 2081 permit.

6 COMMISSIONER ROHY: So it is an MOU.

7 THE WITNESS: Yes.

8 COMMISSIONER ROHY: Thank you.

9 HEARING OFFICER FAY: Mr. Vanherwig, a
10 few questions. On page four of your testimony,
11 you indicate traversing Lokern Natural Area. Has
12 permission been granted for that crossing?

13 THE WITNESS: Based on the -- I don't
14 know for certain, but I have heard that that
15 particular land that has been owned by the
16 California Department of Fish and Game has been
17 traded with another piece of land. And we would
18 go across the same -- the same parcel as the La
19 Paloma Project was planning to do.

20 HEARING OFFICER FAY: So to your
21 knowledge --

22 THE WITNESS: It would not be.

23 HEARING OFFICER FAY: -- no facility of
24 the project will cross an ecological area or a
25 preserve, or anything like that.

1 THE WITNESS: Well, it will go through
2 some -- some Bureau of Land Management properties
3 that -- that would be considered conserved land.
4 But we will have permission, through a -- a right-
5 of-way permit from the Bureau of Land Management
6 to do that.

7 HEARING OFFICER FAY: And they, I
8 understand, are issuing some analysis of that
9 crossing; is that true?

10 THE WITNESS: They are in consult --
11 they are -- actually initiated consultation with
12 the Fish and Wildlife Service to -- to have a
13 biological opinion prepared for this project, for
14 the whole project.

15 HEARING OFFICER FAY: So the biological
16 opinion would cover any NEPA requirements on BLM;
17 is that what you're saying?

18 THE WITNESS: Yes. They would be
19 responsible, the Bureau of Land Management has
20 agreed to -- to do on a -- NEPA compliance for
21 their properties.

22 HEARING OFFICER FAY: All right. So
23 when we receive the biological opinion from U.S.
24 Fish and Wildlife, then we've heard everything,
25 every expression that's expected from the federal

1 government on environmental impacts of the
2 project.

3 THE WITNESS: I believe there will be an
4 environmental assessment issued by the Bureau of
5 Land Management, which would also cover other
6 areas, not only biological resources but other
7 issues.

8 HEARING OFFICER FAY: And what is the
9 status of that -- that environmental assessment?

10 THE WITNESS: I think that you'd -- I'd
11 have to refer that to Mr. Larry Saslaw of the
12 Bureau of Land Management, who is present.

13 HEARING OFFICER FAY: Mr. Saslaw, could
14 you come forward and -- and tell us what the
15 schedule is for getting that assessment.

16 Do you mind being sworn?

17 MR. SASLAW: Sure.

18 (Thereupon, Larry R. Saslaw was, by
19 the court reporter, sworn to tell
20 the truth and nothing but the truth.)

21 TESTIMONY OF

22 LARRY R. SASLAW

23 called as a witness herein, having been first duly
24 sworn, was examined and testified as follows:

25 HEARING OFFICER FAY: What is the status

1 of the environmental assessment that BLM is in the
2 process of doing for the Sunrise Cogeneration
3 Power Project?

4 MR. SASLAW: We are in the process of
5 taking the staff assessment and all of the
6 information from testimony in a core, bringing
7 that into an environmental assessment that will
8 also require the biological opinion from the Fish
9 and Wildlife Service, which will be attached as
10 conditions to our NEPA document. That will
11 undergo a 30-day public review period eventually.

12 But at this point, you know, we're
13 waiting for this moving target of the project to
14 get settled through these proceedings, have a
15 proposed action on the rights-of-way, and then
16 using our NEPA handbook and our regulations,
17 making sure that we have a complete cumulative
18 effects assessment based on these proceedings and
19 the information from the Energy Commission, and
20 from that we will issue a NEPA decision on the
21 rights-of-way for which the Applicant has
22 requested from the Bureau of Land Management.

23 We are -- we can't proceed until we have
24 the biological opinion from the U.S. Fish and
25 Wildlife Service, which, again, we will

1 incorporate that document as a term and condition
2 of issuing our right-of-way through the NEPA
3 process.

4 HEARING OFFICER FAY: Okay. So you'll
5 -- you'll need the biological opinion to do your
6 assessment. Will you also be waiting until after
7 the Commission acts, or -- I'm trying to figure
8 out the timing for your document to go out, in
9 terms of our process.

10 THE WITNESS: I -- typically, it's been
11 customary to where the Bureau of Land Management
12 issues our right-of-way prior or about the same
13 time as the -- as the Energy Commission gives a
14 final decision. I think in -- what we're hoping
15 is that we can quickly turn around and produce the
16 biological evaluation after we have all the
17 pieces. We know where the right-of-way is for the
18 -- for the Bureau authorization, but in order to
19 make sure we have a complete NEPA document, we're
20 probably going to proceed and -- and getting
21 closer to the Presiding Member's decision, so we
22 know we have a complete project to analyze.

23 HEARING OFFICER FAY: All right.

24 THE WITNESS: I don't expect, I guess,
25 that our process will hold up the Applicant in

1 their permitting process, at least from what will
2 proceed.

3 HEARING OFFICER FAY: Okay. Thank you.
4 Thank you, Mr. Vanherwig. That's all I
5 have.

6 Anything on redirect, Mr. Galati?

7 MR. GALATI: No.

8 HEARING OFFICER FAY: Thank you. You're
9 excused.

10 MR. VANHERWIG: Thank you.

11 HEARING OFFICER FAY: Any further
12 witnesses on biology?

13 MR. GALATI: No, I don't.

14 HEARING OFFICER FAY: All right. Then
15 we'll turn to CURE.

16 MS. POOLE: Thank you. Professor
17 Michael Fry is our witness, and he needs to be
18 sworn.

19 (Thereupon, D. Michael Fry was, by
20 the court reporter, sworn to tell the
21 truth and nothing but the truth.)

22 TESTIMONY OF

23 D. MICHAEL FRY

24 called as a witness in behalf of CURE, having been
25 first duly sworn, was examined and testified as

1 follows:

2 DIRECT EXAMINATION

3 BY MS. POOLE:

4 Q Would you please state your name and a
5 description of your qualifications for the record?

6 A I'm D. Michael Fry, Donald Michael Fry.
7 I'm on the faculty, research faculty at the
8 University of California at Davis. I've been in
9 the Department of Avian Sciences, and then now
10 Avian Sciences has merged with Animal Sciences.
11 I've been there since 1981.

12 I'm a wildlife toxicologist. I've been
13 doing research on the effects of oil on wild
14 birds, and other pollutants on wild birds and
15 other wildlife. Effects of pesticides, effects of
16 -- of organochlorine pollutants, both in
17 California and several other places in the U.S.
18 and overseas.

19 I've been a technical expert for the
20 United States in several oil spills, Exxon Valdez,
21 American Trader, Apex Houston, Puerto Rican, and
22 others. And I spent six years as a member of the
23 Science Advisory Committee for Minerals Management
24 Service for their outer continental shelf offshore
25 studies program, where we looked at oil field

1 technology and its effect on ventic organisms,
2 bottom organisms of the ocean, effects on -- of
3 ocean -- other ocean organisms, as well. And I
4 was chairman of that Science Advisory Committee
5 for two years, '60 -- '94 to '96.

6 Q And did you prepare, or was the
7 testimony submitted for CURE on October 15th,
8 1999, prepared under your direction?

9 A Yes.

10 Q Do you have any changes to make to that
11 testimony?

12 A No. I've prepared notes with respect to
13 the declaration that Dr. Charleton has just
14 presented, but I have no changes to -- to this
15 testimony.

16 Q Would you like to briefly summarize for
17 us your original testimony?

18 A I looked at the evidence on kit foxes,
19 evidence on laboratory animals, evidence on
20 peromyscus -- deer mice -- and the differences in
21 sensitivity between those animals I discussed.
22 And then I compared the kinds of clinical findings
23 that have been in the human literature with regard
24 to hydrogen sulfide exposure, and used both the
25 human and the laboratory animal data to support my

1 conclusions that hydrogen sulfide was most likely
2 the compound which was responsible for the blood
3 changes that were seen in the kit foxes and the
4 peromyscus, and the changes in the adrenal glands
5 and changes in liver enzymes and other enzymes
6 that were studied in -- in peromyscus.

7 My research in -- in wildlife toxicology
8 is sort of eco-epidemiology, ecological
9 epidemiology. In many cases, it's not possible to
10 do an actual experiment in the field to support
11 all of the data, and so you -- we have developed,
12 and it was -- the criteria were actually published
13 in the Journal of Great Lakes Research by Glenn
14 Fox from the Canadian Wildlife Service in '91. A
15 series of -- of criteria for looking at the data
16 and establish causality of -- of substances
17 affecting wildlife, or -- they're very much the
18 same as -- postulants for identifying pathological
19 organisms in humans.

20 Again, you -- you don't get to infect
21 humans deliberately, so you don't have that
22 experimental evidence. And similarly, it's often
23 not possible with wildlife.

24 So we've developed a set of criteria,
25 and I've outlined those for the -- my discussions

1 of the rebuttal of -- of Dr. Charleton's report.

2 Do you want me to go into further detail
3 with regard to the specific biochemical and
4 physiological effects of hydrogen sulfide on -- on
5 humans and other organisms, or --

6 Q Perhaps you could simply summarize for
7 us your conclusions.

8 A Okay. Hydrogen sulfide is a very potent
9 inhibitor of a group of enzymes, the
10 cytochromoxidases. Enzymes like that include
11 hemoglobin, which has the same hemeoidi, the same
12 porphyrin moidi that biochemical moidi. And this
13 inhibition of -- of the cytochromoxidases results
14 in hypoxia, results in injury to cells such as the
15 cortical cells in the adrenal gland, in effect
16 will result in some injury to the liver with
17 inhibition of particular enzymes.

18 And Dr. Charleton's testimony and -- and
19 mine conflicted, and she expected one set of
20 enzymes to go up with exposure to the oil fields,
21 and I expected it to go down. It went down, and
22 that was just one of the -- the primary reasons
23 that I thought that hydrogen sulfide was
24 responsible for these inhibitions, because her --
25 well, the enzymes that are -- the two, e-rod and

1 p-rod, which she talks about -- those are both
2 phytochrome enzymes. They're induced by
3 polyaromatic hydrocarbons, other sort of oil field
4 emissions would cause them to go up. But sulfides
5 would make them go down.

6 And here, in -- in the case of the
7 peromyscus, she found they went down. And I
8 thought it was very good correlative evidence.
9 She didn't include that in the paper that was
10 submitted to the Journal of Wildlife Diseases. I
11 would've thought actually it would've strengthened
12 the paper, but in talking with her she really
13 didn't catch the relevance of -- of that
14 particular difference.

15 And she actually brought it up in her --
16 n her testimony again in December, and -- well, we
17 disagreed. And I think the evidence is really
18 good supporting my -- my opinion.

19 Q And specific to this project, what do
20 you anticipate the impacts will be?

21 A A great deal of controls have been put
22 on emissions from -- from the production
23 equipment, and whether or not there's going to be
24 an increase in -- in oil fields emissions, both
25 volatile hydrocarbons as well as hydrogen sulfide,

1 I can't say. But it's likely that it will
2 increase with 700 additional wells.

3 The -- certainly the air emissions from
4 Valley Waste are -- well, I visited Valley Waste
5 over the Christmas/New Year's holiday. I got a
6 set of photographs from NASA, U.S. Geological
7 Survey aerial photos of the facilities, and was
8 amazed at the photographs, and so I went down to
9 look at the ponds. And they're much more
10 extensive than -- than Mr. Bright from Valley
11 Waste described to Rick York, I think. And
12 they're full of oily black water.

13 And it looked to me as though it's about
14 18 acres, not a third of an acre. And --

15 MR. GALATI: I would lodge an objection
16 as why this was not in his written testimony.

17 MS. POOLE: Because his written
18 testimony was filed back when testimony was due on
19 October 15th, and this is rebuttal testimony to
20 staff's changed testimony on Valley Waste, which
21 has come in for the first time today.

22 MR. GALATI: And there was an
23 opportunity to file testimony on January 3rd,
24 based on staff's unresolved conclusion about
25 Valley Waste. There was no filed testimony

1 regarding any investigation, and we're also
2 crossing over into air emissions of a Valley Waste
3 pond which have not been explored here by this
4 Commission, and I don't believe this expert is
5 qualified to do that.

6 MS. HOLMES: I'm going to join in the
7 objection so far as it goes to staff's unresolved
8 issue that was clearly noted in its testimony on
9 December 17th. This is testimony that could have
10 been timely filed.

11 MS. POOLE: Staff stated in its
12 testimony that was due on December 17th that this
13 issue was unresolved, and they could not reach a
14 conclusion on it.

15 MS. HOLMES: That's correct.

16 MS. POOLE: And now they are changing
17 their opinion, and we were waiting for the
18 additional information on water quality to render
19 a final opinion on this subject, and the picture
20 drastically changed after we filed our testimony.

21 MS. HOLMES: I --

22 HEARING OFFICER FAY: I've heard the
23 argument from the parties. I understand your
24 positions. I'm going to overrule the objections
25 and allow the testimony to continue.

1 THE WITNESS: I'm really not too much
2 into politics. I'm a wildlife toxicologist, and
3 my concern has been and was with the Minerals
4 Management Services, and other committees that
5 I've been on, the wildlife protection.

6 And I looked at the -- the report
7 presented by Dr. Charleton in '97. It had very
8 specific and quite consistent data indicating
9 effects. There was a -- I felt, a trend, although
10 not statistic -- not statistically significant, in
11 the reproduction and the survival data of the kit
12 foxes that -- that was done by Linda Spiegel and
13 others at -- at the Energy Commission, the trend
14 really, for three out of the four years she
15 studied it, showed decreased reproduction,
16 decreased survival of -- of young kit foxes in the
17 oil field areas.

18 It seemed perfectly consistent to me, if
19 you look at the habitat down there, it -- it just
20 barely qualifies as habitat. It's an extremely
21 degraded area. Very smelly. And -- and it seems
22 perfectly reasonable that these animals are being
23 exposed.

24 I don't -- I don't think you want me to
25 go through the -- all the criteria that I used for

1 this eco-epidemiological consistency and time
2 order sequence. I will, if you like. But my --
3 my bottom line is that either hydrogen sulfide
4 alone, or in concert with other oil fields
5 emissions, has resulted in these changes in kit
6 foxes and associated in peromyscus, which are two
7 closely related, you know, ground inhabiting
8 mammals in this area.

9 I think the data is quite consistent.
10 And it's not a huge effect. The animals are still
11 there. But I think when -- when staff says
12 there's no statistical difference, I think if they
13 did a -- what they call a power analysis on -- on
14 their data, they would find that their data is
15 sufficiently limited so that they would only be
16 able to detect a very big difference if they did
17 more experiments. Charleton recommended more
18 experiments, I recommended more experiments. I
19 think other people would agree that if more --
20 more studies were done, more monitoring, they'd
21 find significant effects.

22 BY MS. POOLE:

23 Q And if those oil field emissions which
24 you just referred to increase, what do you
25 anticipate the impacts will be?

1 A An increase in the oil field emissions
2 would -- would cause an incremental increase in
3 the -- in the degradation of the overall
4 environment for these animals.

5 Q And that will lead to impacts on the
6 animals directly?

7 A I believe so.

8 Q You stated a minute ago that it's often
9 not possible to do studies in the field on
10 wildlife. Is that in part because you have been
11 studying threatened and endangered species that
12 you can't deliberately harm?

13 A Sure. And even if you -- if you try to
14 do exposure studies in the wild, you're very
15 limited in the -- in the logistics involved. You
16 really can't do enclosed exposure studies on kit
17 foxes or -- or peromyscus even in the wild, simply
18 because if you -- if you put them in a cage then
19 they're no longer in the wild environment, and
20 it's just not possible.

21 So we go through a whole other series of
22 -- of evaluations to try to compensate for that.
23 Look for -- look for pitfalls in the experimental
24 design, or pitfalls in the -- in the logic or the
25 data, and consistency in the data to come up with

1 an answer.

2 Q And did you go through that process with
3 Dr. Charleton's work and her declaration?

4 A Yes.

5 Q And what was your conclusion?

6 A My conclusion was that her data was
7 significant in 1977, and it's still significant.
8 I don't know -- I don't think there's a scientific
9 reason for trying to recant her study at this
10 point. The reasons given for not being published
11 in -- in Journal of Wildlife Diseases were --
12 certainly didn't make the -- the studies
13 themselves any less valid. They said they, you
14 know, they had other things, they had a page
15 limit, and they had other things that were more
16 pressing, so they were going to publish those.
17 And that there were some changes that they would
18 recommend.

19 But I don't, you know, her data was
20 significant then, and it's significant now.

21 Q And in your experience, when studies are
22 conducted on threatened and endangered species, is
23 there typically a large number of animals
24 involved?

25 A No. No, generally there's a very small

1 number involved. Here, the number involved was --
2 well, both in Charleton's study and in -- with
3 Linda Spiegel's study, which I think was
4 astounding given the difficulties, the logistic
5 difficulties in monitoring these animals over the
6 four years that they did them, I think they did an
7 amazingly good job. But the numbers are small.

8 Q You mentioned that you had visited
9 Valley Waste ponds. Could you describe your --
10 what you saw and what your conclusions were based
11 on that visit?

12 A Sure. The area down there is a
13 checkerboard of public land and private land, and
14 you can drive right up next to Buena Vista 2 on
15 public land. And there were six small ponds.
16 Discharge pipe going into one, about eight inches
17 in diameter, I guess. Liquid going into it was
18 hot enough so that it was steaming, and black
19 enough so that it looked like a mixture of oil and
20 water.

21 Those six ponds at Buena Vista 2 are not
22 screened. There are a lot of bear dikes between
23 those ponds and some much larger ponds. Rick York
24 described them as 70 feet across and 500 feet
25 long. But the whole facility is -- really looks

1 like 18 acres to me, not -- not a third of an
2 acre.

3 And all of those big ponds that I could
4 see, that were supposed to be dry, were all filled
5 with black, oily water, so that I -- I don't think
6 -- I think there's some factual errors in the --
7 in the -- the information given by Mr. Bright to
8 Mr. York.

9 Q And none of those ponds were netted;
10 correct?

11 A That's correct. At Buena Vista 2, none
12 of them were netted. There was one small pond
13 netted at Buena Vista 1, I believe.

14 Q And would wildlife be able to access
15 those ponds?

16 A Sure. The -- the banks of those ponds
17 are between 30 and 45 degrees. They're not really
18 excessively steep. A lot of the birds like
19 avocets, black neck stilts, snowy plovers, like to
20 nest on the dikes between ponds. It's been a real
21 problem all through the agricultural evaporation
22 ponds in the San Joaquin. It's been carefully
23 monitored by Joe Scerupa, of Fish and Wildlife
24 Service, for nesting on those evaporation ponds
25 because they're high in selenium and -- and

1 there's a real chance, if the birds are feeding in
2 those ponds, to -- to get deformities in the
3 embryos.

4 These dikes are very similar and very
5 attractive for nesting. They're open areas, the
6 water on both sides provides some protection from
7 predators, although these dikes then become
8 attractive to predators also, because once the
9 predators learn that the birds are nesting on them
10 the predators run up and down the dikes, looking
11 for birds' eggs.

12 So there's a -- there's a real chance
13 for exposure both to birds and to mammals,
14 predatory mammals like kit foxes, running up and
15 down these dikes. And there's about -- I
16 estimated, I thought at on the order of three-
17 quarters of a mile of these dikes at Buena Vista
18 2.

19 Q And these dikes would be potential
20 habitat for migratory birds?

21 A Nesting shore birds, especially. The
22 avocets, black neck stilts, and snowy plovers,
23 yeah. Kill deer, also.

24 Q And what did you observe about the ponds
25 themselves that concerns you?

1 A Well, they were not netted. They all
2 had a black bathtub ring, if you will, extending
3 anywhere from two feet to four feet above the
4 water level of the side of the dikes. There was
5 just oil residue. These are in the -- the big
6 ponds that are supposed to be the clean ponds, as
7 well as the -- the small ponds that actually had
8 hot, oily water discharged into them.

9 Q And would that oily residue harm
10 wildlife if they came into contact with it?

11 A Sure. It's an entrapment hazard for
12 birds, especially.

13 Q You mentioned Joe Scerupa, who is an
14 employee of the United State Fish and Wildlife
15 Service; correct?

16 A Correct.

17 Q And he is employed in the toxics
18 division, and is responsible for inspecting these
19 types of ponds; correct?

20 A Yes.

21 Q Has he visited Valley Waste?

22 A No, he has not. Well, I -- I spoke to
23 him on -- in the middle of December, gave him the
24 aerial photographs I had, and he said he had not
25 been down there.

1 MS. POOLE: Hearing Officer, we do have
2 some photos which Professor Fry took when he was
3 visiting Valley Waste. I'd like to introduce
4 those as an exhibit.

5 HEARING OFFICER FAY: All right.

6 MR. GALATI: And again, we'd object to
7 that. It could've been pre-filed testimony, and
8 we have not seen these photos. And we're not even
9 sure that they are Valley Waste.

10 MS. POOLE: He's -- Professor Fry can
11 authenticate these photos, and like I said, we
12 were hoping to provide this testimony at a later
13 date but since we're being forced to do it now, we
14 think that these photos would be helpful to the
15 Commission.

16 COMMISSIONER MOORE: No. Too far. You
17 know, I'm -- before we break for the lunch break,
18 I'm going -- I'm going to revisit the question of
19 -- of the rigor that we pursue our questions with,
20 and the -- and the nature of how information comes
21 up and gets -- gets disseminated during the
22 hearings.

23 I'm -- I'm okay with the fact that he
24 took a visit down during the holidays, and I think
25 that's -- frankly, that's -- that's good that he's

1 able to report back. And given his qualifications
2 and what he brings to this hearing, I think that's
3 -- it was a good call to have those observations
4 come in. It certainly informs the committee.

5 But you're talking about introducing
6 evidence, or -- or information that's going to
7 have to be analyzed and verified and validated,
8 and -- and I trust that there are people on the
9 first floor who are probably tuned in to this
10 through the squawk boxes, and I'll communicate
11 this in further letters to the Siting Committee.
12 But the process and the alacrity with which people
13 are responding to getting information in on time,
14 or in a sequential manner in this and other
15 hearings, is getting a little bit out of -- out of
16 bounds.

17 So I'll just say that generally. I'll
18 have more comments on that later on, but this one
19 is not allowed.

20 MS. POOLE: I appreciate that,
21 Commissioner, and we -- we would much prefer to do
22 this later on.

23 COMMISSIONER MOORE: I understand.

24 HEARING OFFICER FAY: But since we are
25 interrupted here, I'd just like to indicate that

1 Dr. Fry's testimony, when you choose to move it
2 in, will be designated as Exhibit 72.

3 MS. POOLE: And I would like to confirm
4 there was an attachment to Dr. Fry's testimony,
5 which we submitted on January 3rd. That will be
6 included in that exhibit?

7 HEARING OFFICER FAY: That is part of
8 the -- yes, that's part of Exhibit 72. Labeled
9 "Biology Attachment 1."

10 (Thereupon, Exhibit 72 was marked
11 for identification.)

12 BY MS. POOLE:

13 Q Going back to hydrogen sulfide impacts.
14 Are there further responses you'd like to make to
15 Dr. Charleton's declaration?

16 A I don't think so.

17 Q The Applicant has proposed to purchase
18 land in the Lokern Natural Area to mitigate the
19 project's impacts on listed species. In your
20 opinion, is this measure adequate mitigation for
21 the project's impacts?

22 A I think \$655,000 and 600 acres of land
23 is -- is very laudable. And given the habitat
24 degradation in the area of the cogen plant, I
25 think 650 acres is great. Yes, I think it's

1 adequate.

2 MS. POOLE: The witness is available for
3 cross.

4 HEARING OFFICER FAY: Mr. Galati.

5 CROSS EXAMINATION

6 BY MR. GALATI:

7 Q Dr. Fry, did you conduct a study of H2S
8 in the oil field?

9 A No, I did not.

10 Q In fact, you rely on Linda Spiegel's
11 report and Dr. Charleton's report as --

12 A Yes.

13 Q -- your evidence of --

14 A Sure.

15 Q And both those authors disagree with
16 your conclusions.

17 A Yes.

18 Q In fact, Dr. Charleton says you
19 shouldn't use my report to make your conclusions.

20 A I think it's really regrettable that
21 politics cuts through science here.

22 Q I'm -- I'm asking you whether she said
23 that. I'm not asking you to speculate as to why
24 she may have said that, in your opinion. I'm
25 asking you did she recommend that you not use her

1 study to draw your conclusions?

2 A No, she didn't recommend that to me.
3 She told Rick York.

4 Q And did she also recommend that at the
5 October 28th workshop, to you?

6 A I don't recall.

7 Q Do you know if H2S is a polyaromatic
8 hydrocarbon?

9 A No.

10 Q You don't know, or it is not?

11 A It is not.

12 Q Thank you. When did you visit the
13 Valley Waste ponds?

14 A The 30th of last month.

15 Q And did you actually physically go on
16 Valley Waste property?

17 A No.

18 Q You drove next to it?

19 A I believe so, yes.

20 Q And you said that the material you saw
21 was hot?

22 A You could see it steaming, yeah.

23 Q Are you aware of another facility next
24 to Valley Waste?

25 A Buena Vista 1.

1 Q Are you aware of another facility not
2 owned by Valley Waste, which is next to Buena
3 Vista 2?

4 A No.

5 Q Did you notice any birds during your
6 visit?

7 A I didn't notice any birds.

8 Q Did you see any evidence of nesting on
9 these dikes?

10 A No, I would've had to've gone on the
11 dikes to look for evidence of nesting. And the
12 nesting season is in -- in May and June.

13 Q So you did not see any?

14 A Correct.

15 Q And you did not see any birds?

16 A No.

17 MR. GALATI: No further questions.

18 HEARING OFFICER FAY: Ms. Holmes.

19 MS. HOLMES: No questions.

20 HEARING OFFICER FAY: No questions?

21 MS. HOLMES: No questions.

22 HEARING OFFICER FAY: I just have a
23 question, Dr. Fry.

24 You indicated, I believe, that the --
25 that the area in which the 700 wells would be

1 built is highly degraded, in terms of habitat. Is
2 that correct?

3 THE WITNESS: Yes.

4 HEARING OFFICER FAY: And you also
5 praised Linda Spiegel's study. Is that -- is that
6 also correct?

7 THE WITNESS: Yeah. Yeah.

8 HEARING OFFICER FAY: Given that her
9 study found that the kit fox survivability, or
10 survivorship and -- and reproduction rates were
11 not significantly different in the oil field
12 versus other more natural areas, does that suggest
13 to you that the degraded environment there,
14 whether or not H2S is impacting it, is not having
15 a significant impact on kit fox?

16 THE WITNESS: What Linda found was that
17 the -- the differences between the Lokern area and
18 the oil field area didn't reach 0.05 as a P value.
19 They were at 0.06. Now, that's very nearly
20 statistically significant. And she found trends
21 three out of four years in the negative direction
22 in the oil field for a variety of different
23 parameters. And the absence of no statistical
24 difference is not the same as no difference. It
25 just means that the power that you used to test

1 the thing was inadequate to resolve the -- the
2 data.

3 There -- in my opinion, there's
4 definitely a trend toward decreased survival and
5 decreased reproduction in the oil field. In the
6 four years that they studied it, they found it
7 three out of four years. But, you know, three out
8 of four years doesn't -- doesn't give you a
9 statistically significant data. If they'd done it
10 five years, presumably they would've taken that
11 .06 and dropped it to .04, and then it's magically
12 significant.

13 HEARING OFFICER FAY: Thank you.

14 COMMISSIONER ROHY: Dr. Fry, in your
15 testimony I believe you said the liquid coming
16 into the pond was hot enough for steaming.

17 THE WITNESS: Yes.

18 COMMISSIONER ROHY: Could you estimate
19 the temperature of that "hot enough"? Or --

20 THE WITNESS: Could I estimate the
21 temperature?

22 COMMISSIONER ROHY: Yes.

23 THE WITNESS: No, I just, you know --

24 COMMISSIONER ROHY: Do you know what the
25 relative humidity was that day?

1 THE WITNESS: In western Kern County --

2 COMMISSIONER ROHY: Where you were
3 observing.

4 THE WITNESS: Pretty much zero, I would
5 think.

6 COMMISSIONER ROHY: And do you know the
7 temperature of the pond that the fluid was going
8 into?

9 THE WITNESS: No, I don't.

10 COMMISSIONER ROHY: DO you think those
11 could've affected the fact that steam came out of
12 them?

13 THE WITNESS: Well, sure. You know --

14 COMMISSIONER ROHY: I'm just wondering
15 what "hot enough" meant.

16 THE WITNESS: My understanding is that
17 they use steam injection into the formation to
18 liquefy the oil, so that when it comes out of the
19 formation it is, in fact, superheated. And they
20 do separation of produced water from the oil, and
21 -- not very good separation of the produced water
22 --

23 COMMISSIONER ROHY: But I'm just asking
24 of how you judged the --

25 MR. GALATI: I object to the

1 qualifications of this witness.

2 COMMISSIONER ROHY: I'm just asking for
3 exactly how -- how you had judged it, because is
4 there fog in the western Kern area?

5 THE WITNESS: No, there certainly wasn't
6 that day. It was --

7 COMMISSIONER ROHY: But does it happen
8 in the western --

9 THE WITNESS: Oh, sure. Yeah.

10 COMMISSIONER ROHY: And relatively low
11 humidity days?

12 THE WITNESS: And when the dew point
13 gets down. Sure, you --- you'd find that. But
14 this was, you know, it hasn't rained in the
15 western Kern in awhile.

16 COMMISSIONER ROHY: Second question is,
17 how do you judge the fact that it was black. How
18 far away were you from the liquid so you could see
19 that it was black?

20 THE WITNESS: A hundred feet.

21 COMMISSIONER ROHY: And at what angle
22 were you looking at it? Do you think this was a
23 specular or a diffused reflection that you were
24 seeing?

25 THE WITNESS: Oh, you could see definite

1 iridescence from the oil film on the top of the
2 water in some -- in some cases. But the -- I
3 agree, it's very difficult to tell with -- in the
4 absence of an oil film on top of the water, if the
5 lining of the pond is black from -- from many
6 years of percolation or evaporation, then
7 transparent water on top of a black surface is
8 going to look black. There's no question about
9 that. But there was iridescence on the surface.

10 COMMISSIONER ROHY: How --

11 THE WITNESS: Which I photographed.

12 COMMISSIONER ROHY: And how deep do you
13 think that iridescence goes? I'm trying to
14 remember back to my freshman physics. Are we
15 talking --

16 THE WITNESS: Your freshman physics
17 would say that -- that iridescence would be gray
18 at about 20 to 60 nanometers, and becomes, you
19 know, it's very thin --

20 COMMISSIONER ROHY: Effectively --

21 THE WITNESS: -- to be iridescent.

22 COMMISSIONER ROHY: -- very thin. Thank
23 you.

24 HEARING OFFICER FAY: Anything further,
25 Ms. Poole?

1 MS. POOLE: May I have just one minute.

2 (Pause.)

3 REDIRECT EXAMINATION

4 BY MS. POOLE:

5 Q Dr. Fry, are you certain that the
6 facility that you visited in late December was
7 Buena Vista 2?

8 A From the aerial photographs that I had
9 from U.S. Geological Survey, and the USGS topo
10 maps, and the township range and section maps from
11 Valley Waste, yes, there's no question in my mind
12 that these facilities are not -- are the correct
13 facilities.

14 MS. POOLE: Thank you. That's all.

15 HEARING OFFICER FAY: All right. Thank
16 you, Dr. Fry.

17 And that concludes -- yes, Mr. Galati.

18 MR. GALATI: I have two questions with a
19 rebuttal -- with a rebuttal witness. Just two
20 questions.

21 HEARING OFFICER FAY: And what --

22 MR. GALATI: Response to what he brought
23 up now that was not in his written testimony.

24 HEARING OFFICER FAY: Oh, all right.

25 Just a moment.

1 (Inaudible asides.)

2 HEARING OFFICER FAY: Okay. Is this
3 brief?

4 MR. GALATI: I have two questions.

5 HEARING OFFICER FAY: Okay. We'll go
6 ahead and take that rebuttal testimony, and any
7 questions of this witness, and then break for
8 lunch.

9 Go ahead.

10 TESTIMONY OF

11 WILLIAM J. VANHERWIG

12 called as a witness on behalf of the Applicant,
13 having previously been duly sworn, was examined
14 and testified further as follows:

15 DIRECT EXAMINATION

16 BY MR. GALATI:

17 Q Mr. Vanherwig, you heard Dr. Fry's
18 testimony. In your -- do you have an opinion of
19 whether or not he's talking about the Buena Vista
20 2 facility?

21 A In my opinion, he is not. There are --
22 there's -- there are many ponds, but some of them
23 are not used anymore, and they show up on the
24 topographic map as evaporation ponds. The Valley
25 Waste portion of those ponds is very small, and

1 there's another -- ARCO used to own some other
2 ponds that you can actually see water on. I
3 wasn't able to see any water in any of the ponds
4 at Valley Waste at the facility.

5 But there is another facility adjacent
6 to that facility that had a pipeline labeled ARCO,
7 and I don't know who owns that pipeline or those
8 facilities now. But it's a separate situation.
9 And you can actually see water there.

10 So I -- I believe that that's possible
11 -- possibly what Dr. Fry was looking at, were the
12 places that -- that are owned by another company.
13 And Texaco does not -- cannot supply any
14 wastewater to that facility.

15 Q And with respect to Dr. Fry's testimony
16 regarding the material being hot, does that -- do
17 you have an opinion about whether that would
18 affect wildlife?

19 A I would assume that that would be
20 detrimental. They could feel the heat before
21 lighting on it, and -- and there must be a reason
22 why there weren't any birds on the water, because
23 at a similar place -- I'm also a -- one of my
24 clients runs a -- the Kern water bank, and there
25 was water during the same period of time, and it

1 was full of all kinds of ducks and other shore
2 birds during the same period of time. So there
3 must be some good reason, and the heat could be
4 one of those reasons why they do not find it
5 attractive.

6 MR. GALATI: I have no further
7 questions.

8 MS. HOLMES: Hearing Officer Fay, I also
9 have one rebuttal question to ask of Ms. Spiegel,
10 going to the statement that Dr. Fry made.

11 HEARING OFFICER FAY: Okay. Well, let's
12 --

13 MS. HOLMES: I don't have any questions
14 of this witness.

15 HEARING OFFICER FAY: Okay. Ms. Poole,
16 any questions of this witness?

17 MS. POOLE: Just -- just a minute,
18 please.

19 CROSS EXAMINATION

20 BY MS. POOLE:

21 Q Mr. Vanherwig, you didn't accompany Dr.
22 Fry on his visit to Valley Waste ponds, did you?

23 A No, I did not.

24 MS. POOLE: Thank you.

25 HEARING OFFICER FAY: Ms. Holmes, then.

1 MS. HOLMES: Thank you.

2 TESTIMONY OF

3 LINDA SPIEGEL

4 called as a witness on behalf of the Commission
5 staff, having been previously duly sworn, was
6 examined and testified as follows:

7 DIRECT EXAMINATION

8 BY MS. HOLMES:

9 Q Ms. Spiegel, just a little while ago
10 there was a discussion about the survivability of
11 kit fox in reference to your study. Do you
12 recollect that discussion?

13 A Yes, I do.

14 Q Would you please summarize what your
15 results were for the committee, and whether or not
16 you agree with Dr. Fry's characterizations of
17 them?

18 A For kit fox survivorship and
19 reproduction, there was a comment that there was
20 significance at .06, and I just want to clarify
21 that that was -- we looked at survivorship of
22 adult, young, and then between areas as well
23 developed and undeveloped for all those different.
24 So developed young versus undeveloped young,
25 developed adult versus undeveloped adult. And

1 what we -- and we did it for four years, and all
2 years.

3 So there was an awful lot of different
4 comparisons being made. And the .06 was -- would
5 be for young. In 1992 there was a significant
6 difference between survivorship males in --
7 actually, no. I'm sorry. The .06 would be for
8 all years that -- the young, there's a little bit
9 less survivorship for males over -- young males
10 over young females, for the most part, and that
11 was caused because of an increased number of
12 coyote predation in 1992. So we do have kind of
13 like a cause and effect there.

14 Survivorship, he talked about that there
15 was three and at four years. We had a trend that
16 was only for reproductive success, and not for
17 survivorship. As a matter of fact, survivorship
18 was greater in the developed areas for adults in
19 three out of four years.

20 And also, I just want to caution any --
21 sample size within any one year is low. So we
22 like to put all the years together. That's why
23 you do long term data. And as a matter of fact,
24 we really needed to do longer term studies than
25 just the four years we did.

1 But any comparison made for any
2 individual year is not really reliable, because
3 sample size is so small. And so statistically,
4 it's not quite as reliable as when you poll your
5 years.

6 HEARING OFFICER FAY: Is that all?

7 MS. HOLMES: That's all.

8 HEARING OFFICER FAY: Thank you.

9 Any questions? Mr. Galati.

10 MR. GALATI: No. I don't think we
11 disagree.

12 HEARING OFFICER FAY: Ms. Poole, any
13 questions of this witness?

14 MS. POOLE: No questions.

15 HEARING OFFICER FAY: Okay. Thank you.

16 Okay, we're going to take a one hour
17 break for lunch and come back at ten minutes after
18 one.

19 (Thereupon, the luncheon recess was
20 taken.)

21

22

23

24

25

1 Are you prepared to go ahead with your
2 presentation on Public Health?

3 MR. GALATI: I'm sorry.

4 HEARING OFFICER FAY: Mr. Galati, are
5 you prepared to go ahead with your presentation on
6 Public Health?

7 MR. GALATI: Yes, we are.

8 HEARING OFFICER FAY: Okay. Go ahead.

9 MR. GALATI: For Public Health, the
10 Applicant presents Mr. David Stein, who has
11 already been sworn. And to the extent that we
12 overlap into worker safety, Ken Worl, who has
13 previously been sworn, is also here.

14 And to the extent there's any rebuttal
15 testimony offered on our part, Tom Booze, who was
16 previously listed, is here. He has not been
17 sworn.

18 But for direct testimony, it'll be David
19 Stein.

20 TESTIMONY OF

21 DAVID STEIN

22 called as a witness on behalf of the Applicant,
23 having been previously duly sworn, was examined
24 and testified further as follows:

25 ///

1 DIRECT EXAMINATION

2 BY MR. GALATI:

3 Q Mr. Stein, you have previously given
4 your name, address, and current employment. Have
5 you previously prepared and submitted written
6 testimony in this AFC proceeding with respect to
7 Public Health?

8 A Yes, I supervised and participated in
9 the preparation of the Public Health analysis, and
10 prepared written testimony.

11 Q And are you sponsoring any exhibits at
12 this hearing?

13 A In addition to the written testimony
14 that I just referred to, I'm also sponsoring
15 Exhibit 1 of the -- which is the AFC, Sections 8.6
16 and Appendix F.

17 Also, Exhibit 3, the Transmission
18 Supplement Number 2, Section 3.8. And Exhibit 7,
19 Sunrise comments on -- on the Preliminary Staff
20 Assessment.

21 Q And do you have any -- can you affirm
22 that testimony under oath today?

23 A Yes.

24 Q And do you have any corrections or
25 modifications to that testimony?

1 A Yes. One minor correction. In my
2 written testimony, under the second bullet, that
3 should read Appendix F. I think it's listed as
4 Appendix B, which is the Air Quality appendix.
5 Appendix F is the appendix that corresponds to the
6 Public Health analysis.

7 Q Okay. And would you please summarize
8 your testimony.

9 A Construction and operation of the
10 Sunrise Project may result in a small -- in
11 emission of small quantities of toxic air
12 contaminants. Potential sources of such
13 contaminants associated with Sunrise Project
14 include construction equipment exhaust and the
15 exhaust from the two natural gas-fired combustion
16 turbines.

17 In addition, there is the potential that
18 steam from the Sunrise Project will be provided to
19 up to 700 new wells that would be drilled and
20 operated near the Sunrise site. The emissions
21 from the drilling and operation of these 700 wells
22 are considered a potential indirect effect of the
23 project.

24 I have reviewed the staff's evaluation
25 of the potential impacts associated with

1 construction of the Sunrise Project. The Sunrise
2 Project will utilize construction equipment that
3 is very similar to the types of construction
4 equipment proposed by numerous applicants before
5 this Commission. The Commission has found that
6 the use of such equipment does not pose a
7 significant public health risk on several recent
8 siting cases, including the La Paloma case, the
9 Sutter case, and the Pittsburg energy facility.
10 There is nothing unique about the construction
11 equipment being proposed by Sunrise relative to
12 these other projects.

13 And I agree with staff's conclusion that
14 the construction of the Sunrise Project will also
15 not cause a significant health risk to the general
16 public.

17 Since these impacts will be
18 insignificant, I do not agree with staff that
19 additional mitigation such as oxidizing filters or
20 catalysts for construction equipment is needed to
21 reduce insignificant -- to reduce already
22 insignificant potential health risks to the
23 general public. Such mitigation has not been
24 found to be necessary on other recent siting cases
25 where either more construction equipment will be

1 used, or where construction equipment will occur
2 in closer proximity to populated areas.

3 I have also reviewed the staff's
4 evaluation of potential health risk during
5 operation. I agree with staff's conclusion that
6 operation of the Sunrise Project will not cause
7 any significant health risk to the general public.

8 I also agree with staff's conclusion
9 that other relevant power projects being proposed
10 in the area, the La Paloma project and the Elk
11 Hills project, are too far apart from the Sunrise
12 Project to result in any significant cumulative
13 health risk to the general public.

14 With respect to the potential indirect
15 effects of well operations, I agree with staff's
16 conclusion -- excuse me -- that the San Joaquin
17 Valley Unified Air Pollution Control District has
18 regulations that require additional controls to be
19 in place for wells or for emission from new wells
20 and appurtenant equipment. I also agree with
21 staff that the incremental change in emissions
22 would be small and would not cause a significant
23 risk to the general public.

24 With respect to the testimony provided
25 by the labor unions, I have also reviewed the

1 testimony filed by the unions, and there are
2 several opinions offered in the union testimony
3 with which I disagree.

4 The points of disagreement are outlined
5 in my written testimony, and I'll just summarize a
6 couple briefly here.

7 With respect to the applicability of
8 CAPCOA guidelines to the CEC siting process, I'd
9 like to point out that the CAPCOA health risk
10 assessment guidelines were specifically prepared
11 to provide uniformity in the preparation of health
12 risk assessments prepared under the AB 2588 air
13 toxics program. They were not specifically
14 prepared for the CEC siting program. In fact, the
15 guidelines are clear that review of potential
16 public health risks by other agencies for other
17 programs may involve the use of different
18 guidelines, and that the appropriate agencies
19 should be contacted to determine whether different
20 guidelines are in use.

21 The Sunrise Project will, in fact, be
22 subject to the AB 25 program following
23 commencement of operation. And at that time,
24 Sunrise would inventory its actual emissions,
25 complete a facility prioritization, and, if

1 necessary, perform a health risk assessment and
2 provide any -- any reduction on risk that might be
3 considered excessive.

4 With respect to worker exposure
5 standards and worker environments, I disagree with
6 CURE's assertion that OEHHA's reference exposure
7 levels rather than worker exposure standards
8 should be used to evaluate public health risk,
9 particularly in the intensively developed oil
10 field. There is -- this is an area that is not
11 inhabited by the general public. Oil field
12 workers are subjected to stringent Cal-OSHA's
13 industrial safety regulations, including exposure
14 limits for potentially toxic chemicals.

15 I understand that these regulations
16 require that oil field workers be advised of
17 potential health risks in their workplace, and
18 that they be provided with appropriate training,
19 protective equipment, and monitoring to ensure
20 their workplace exposure meets these standards.
21 The potential exposures associated with the
22 possible indirect effects from oil field
23 operations, i.e., the -- the potential 700 new
24 wells and appurtenant facilities, are not unique
25 to the Sunrise Project. Oil field workers are, in

1 fact, exposed to these risks routinely, and the
2 Sunrise Project does not present any new or
3 unusual change in their existing workplace.

4 Therefore, it is appropriate to evaluate
5 potential exposure to oil field workers with
6 respect to these standards, not RELs that have
7 been adopted for the purpose of informing and
8 protecting the general public at large under the
9 AB 2588 air toxics hot spots and information
10 assessment act.

11 I agree with the staff that when Sunrise
12 direct or indirect effects in the oil field are
13 compared with the appropriate workplace standards,
14 the impacts are well below the standards and
15 therefore insignificant.

16 Q Mr. Stein, with respect to the testimony
17 that you reviewed, specifically that portion that
18 deals with the treatment of acrolein, do you have
19 any comments on what CURE has alleged is -- in
20 their analysis on the treatment of acrolein?
21 Specifically, the test methods?

22 A Well, yes, I do. I -- the union's
23 testimony is that -- that the test method used for
24 -- for acrolein is -- is inappropriate, and I
25 would just point out that -- that that test method

1 was -- was widely used under the AB 2588 program.
2 And -- and that the Air Resources Board has
3 developed and maintained an extensive database
4 which they make available to sources, proposed
5 sources such as Sunrise for purposes of projecting
6 what future air toxics emissions might be in the
7 absence of being able to conduct actual
8 measurements.

9 And the test method that is being
10 currently used in that program does not provide
11 any specific direction or caution with respect to
12 how to modify the method to specifically address
13 any potential underestimate for acrolein. And in
14 fact, the -- the database that ARB makes available
15 to the public for use also does not contain any
16 cautionary note.

17 So we believe that the emission factors
18 that we've used are appropriate. And even if you
19 were to work under the guidelines that are
20 prepared under 2588, as the labor unions have
21 suggested, those guidelines are pretty clear that
22 the -- the emission rates should be those that are
23 -- are developed under the inventorying process
24 under 2588, and the emission factors that we've
25 used are, in fact, those emission factors.

1 There's no other adjustment that is -- is
2 recommended by the guidelines.

3 Q Mr. Stein, you've heard testimony, I
4 think, previously here about the Avila Beach
5 project?

6 A Yes.

7 Q And I think specifically some reference
8 to acrolein emissions or issues raised in air
9 quality and compared to the Avila Beach project;
10 is that correct?

11 A Yes.

12 Q Did you have a chance to research at all
13 about the Avila Beach project?

14 A I did.

15 Q And do you have any opinions regarding
16 that project?

17 A Well, I -- I had the opportunity to --
18 to review a document called the community
19 monitoring program that was developed for that
20 remediation project, which I might point out is
21 one of the more contaminated sites in close
22 proximity to a community. And it's particularly
23 relevant because the report was prepared by -- by
24 a number of individuals, including Phyllis Fox,
25 who is here presenting testimony for the labor

1 unions. In fact, this -- this report was written
2 based on a collaborative process by Phyllis Fox.
3 It says chapters one and two, Eric Winegar, who is
4 another individual who's testified in these
5 proceedings, wrote chapter three.

6 When I reviewed it, I found a couple of
7 interesting points that caught my attention. And
8 if -- if you're -- with your indulgence, I'll just
9 read a couple of excerpts out of this report.

10 The first of these is on page 2-19,
11 which is -- well, one of the chapters that Phyllis
12 Fox authored. And I'm reading from a section
13 entitled hydrogen sulfide.

14 It says, humans are continuously and
15 routinely exposed to substantially higher
16 concentrations of hydrogen sulfide with no ill
17 effects. Hydrogen sulfide is produced
18 endogenously from l-cystine in mammalian tissues.
19 It is present at relatively high concentrations in
20 the brain. They cite Abe and Kamura, 1996. And
21 apparently has a physiological function of
22 relaxing smooth muscle tissue. Saki, et al, 1997.

23 Hydrogen sulfide is also present in the
24 human breath at concentrations of 65 to 698 parts
25 per billion, Blanchard and Cooper, 1996, and in

1 intestinal gases, Saltzman and Syker, 1968.

2 And then further on in this paragraph it
3 correctly notes that the California one-hour
4 standard for H2S is 30 parts per billion, which is
5 substantially lower than that that is, in fact,
6 found to naturally occur in the human body.

7 I'd like to cite another portion from
8 page 2-21. In a discussion of acute RELs, which
9 were established under this program to -- as part
10 of their -- their action level for mitigating
11 acute risk that might be associated with this
12 construction activity, which includes a lot of
13 construction equipment which would be very
14 similar, I would guess, to the -- to the types of
15 equipment that would be involved in the
16 construction of the Sunrise Project.

17 Because large margins of safety were
18 used by OEHHA in -- during the development of
19 acute RELs, exceeding the REL does not
20 automatically indicate an adverse health effect.
21 This is in the chapter authored by Dr. Fox.

22 Okay. Then I'd like to point out in a
23 -- in the next chapter, chapter 3, which was a
24 chapter that was co-authored by Eric Winegar, who
25 testified here previously, with respect to

1 acrolein, that this program that was designed, I
2 assume, at least in part if not principally by
3 Eric Winegar, does in fact include a -- a
4 measurement of acrolein. And the method that is
5 -- is or was recommended for use is a reference
6 method called TO-11. It's an EPA reference
7 method.

8 TO-11 is a method that involves the
9 collection of samples on DNPH impregnated
10 cartridges. This is the specific substance that
11 is also used in the CARB 430 method that -- that
12 the labor union's testimony has criticized. And
13 so I would just point out that -- that the
14 consultant who has criticized that method is also
15 recommending it for use in another community
16 program. Community monitoring program.

17 The last thing I'd like to point out in
18 chapter 3, again, this is the -- the chapter that
19 was co-authored by Eric Winegar, is a description
20 of how the background concentrations were
21 developed. And I -- I quote, a special work group
22 including representatives of the local lead
23 agencies and Unocal, has been formed and will work
24 together to develop procedures and identify and
25 validate the data that will be used to determine

1 site background.

2 That's -- that's all my comments on this
3 document.

4 MR. GALATI: Mr. Stein is available for
5 cross examination.

6 HEARING OFFICER FAY: Ms. Holmes.

7 MS. HOLMES: I have no questions of this
8 witness.

9 HEARING OFFICER FAY: Ms. Poole.

10 MS. POOLE: I'm deferring to Mr. Joseph
11 for this portion.

12 HEARING OFFICER FAY: Okay.

13 MR. GALATI: Mr. Fay, I wonder, before
14 we begin, we could have marked Mr. Stein's most
15 recent testimony as an exhibit, so that we can
16 refer to it conveniently.

17 HEARING OFFICER FAY: Thank you for
18 helping us in our housekeeping. Yes. And that
19 will be, I believe, Exhibit 73, Mr. Stein's
20 testimony.

21 (Thereupon, Exhibit 73 was marked
22 for identification.)

23 MR. GALATI: And Mr. Fay, I'd like to
24 move those exhibits into evidence at this time.

25 HEARING OFFICER FAY: The testimony and

1 the exhibits that he relied upon?

2 MR. GALATI: And the other exhibits he
3 sponsored.

4 HEARING OFFICER FAY: All right. Any
5 objection?

6 MS. POOLE: What are the other exhibits,
7 besides the testimony?

8 HEARING OFFICER FAY: Well, the --

9 MR. GALATI: He sponsored a list of
10 exhibits.

11 HEARING OFFICER FAY: The list of
12 exhibits on page one of his testimony.

13 MS. POOLE: Oh, right.

14 HEARING OFFICER FAY: Is that correct?

15 MR. GALATI: Yes.

16 MR. JOSEPH: I wonder, Mr. Fay, if we
17 could also mark as an exhibit the community
18 monitoring program document that Mr. Stein read
19 from.

20 HEARING OFFICER FAY: And what is the
21 title of that?

22 MR. GALATI: It is entitled the
23 Community Monitoring Program, Avila Beach
24 Remediation Project, dated February 8th, 1999.

25 HEARING OFFICER FAY: I've marked that

1 as Exhibit 74. Let's mark that as Exhibit 74.

2 (Thereupon, Exhibit 74 was marked
3 for identification.)

4 MS. POOLE: I'm sorry, I missed the
5 number.

6 HEARING OFFICER FAY: Exhibit 74.

7 MS. POOLE: Thank you.

8 HEARING OFFICER FAY: And will you make
9 a copy of that available?

10 MS. POOLE: Will a copy be available for
11 the parties?

12 MR. GALATI: I can have copies made for
13 the parties. That has not been docketed, nor had
14 I intended to move it into evidence.

15 HEARING OFFICER FAY: Let me ask,
16 perhaps, Mr. Galati, do you have two copies of it
17 over there?

18 MR. GALATI: I have one that has Mr.
19 Stein's personal notes, which I would not like to
20 share with you.

21 HEARING OFFICER FAY: We can -- we can
22 share this one with you.

23 Did you say you are not moving it into
24 evidence?

25 MR. GALATI: I had not marked it, nor

1 was I moving it into evidence.

2 HEARING OFFICER FAY: It's marked for
3 identification.

4 CROSS EXAMINATION

5 BY MR. JOSEPH:

6 Q Good afternoon, Mr. Stein. I take it,
7 from the description of your experience and your
8 testimony, that you have a lot of experience
9 performing health risk assessments?

10 A I have performed health risk assessments
11 in the past, yes.

12 Q And I take it, from the testimony that
13 you just gave, that you are familiar with the
14 CAPCOA guidelines?

15 A Yes, I am generally familiar with the
16 CAPCOA guidelines.

17 Q And the AFC, in the portions that you
18 sponsored, relied on the CAPCOA guidelines; is
19 that right?

20 A I think we said that we generally
21 followed the CAPCOA guidelines.

22 Q Would you turn to page 8.6-7 of the AFC,
23 please?

24 THE WITNESS: Bear with me a second.
25 We'll get a copy of that.

1 Which page number did you want me to
2 look at?

3 BY MR. JOSEPH:

4 Q 8.6-7.

5 A Okay, I think I've got that.

6 Q Could you read for us the first sentence
7 in the paragraph number 8.6.3.3?

8 A The potential health risks, human health
9 risk posed by the Sunrise Project turbines were
10 assessed using procedures consistent with the
11 California Air Pollution Control Association air
12 toxics hot spots program, revised 1992, risk
13 assessment procedures, as required under the air
14 toxics hot spots information and assessment act of
15 1987, Assembly Bill --

16 Q Excuse me. I just asked for the first
17 sentence.

18 A Oh, I'm sorry.

19 Q So let me try again. You did rely on
20 the CAPCOA guidelines in preparing the health risk
21 assessment for the AFC; is that right?

22 A Yes. We generally followed those
23 guidelines.

24 Q Well, you keep putting the word
25 generally in there. You relied on them, didn't

1 you?

2 MR. GALATI: I object to the
3 mischaracterization of his testimony. In that, it
4 says it's consistent with. If you want to use
5 that language, then we can all be on the same
6 playing field.

7 BY MR. JOSEPH:

8 Q My question is, did you rely on them?

9 A I stand by my response. Yes, we
10 generally followed the guidelines.

11 Q And you generally followed the
12 guidelines because you believe those are the
13 appropriate guidelines for use -- for performing
14 the health risk assessment. Is that right?

15 A In general, yes.

16 Q Okay. Now, let's turn back to Exhibit
17 73, which is your most recent testimony.

18 A Are you referring to this -- my written
19 testimony?

20 Q Yes.

21 A Uh-huh. Okay.

22 Q Would you turn to page 4, please?

23 A Page 4. Okay.

24 Q At the top of the page, in the paragraph
25 that runs over from the previous page, I just want

1 to clarify your use of some words here and be sure
2 we're understanding each other, get some
3 background information.

4 You say, as the staff has noted, the
5 nearest public receptor is approximately 1.3 miles
6 from the site. When you use the word "public"
7 there, you mean residential; is that right?

8 A Yes.

9 Q And just below that, you note that the
10 maximum impact is located in the oil field.

11 A Yes.

12 Q Are there workers in that oil field who
13 will not be employed by Sunrise?

14 A I haven't personally gone out and done a
15 survey of all the people that are out in the oil
16 field, but I would presume that given its size,
17 there are probably oil field workers out there
18 that are not employed by Texaco.

19 Q Actually, I asked whether they were
20 employed by Sunrise.

21 A Oh.

22 Q Interesting that you should lump them
23 all together at this point.

24 A I thought you --

25 Q But I'll ask the question specifically

1 again.

2 A -- I thought you asked Texaco.

3 MR. GALATI: I object.

4 MR. JOSEPH: You object to your
5 witness's answer there?

6 Yeah. Let's be certain we have a clear
7 record here.

8 BY MR. JOSEPH:

9 Q Will there be workers in the oil field
10 not employed by Sunrise?

11 A I believe there probably would be. Yes.

12 Q Thank you. Now, in the next section, on
13 indirect impacts. In the second last sentence of
14 that section, again you say that in the oil field
15 area, which is generally inaccessible to the
16 general public. Again, you're drawing that
17 distinction there between a residential exposure
18 and a worker exposure. Is that right?

19 A Well, I'm drawing the distinction
20 between folks that are out there working in the
21 oil field and anyone else who probably is --
22 shouldn't be out there without permission. And so
23 I, you know, I would extend that beyond just a
24 residential receptor. But --

25 Q So you're actually making an even

1 broader statement that there -- not only would be
2 no residential exposure, there won't be exposure
3 to anyone who isn't an employee. Is that what
4 you're saying?

5 A Well, I'm saying that anyone who is out
6 in that oil field is there -- should be there with
7 the specific consent of an operator for some
8 purpose related to the operations that are there.
9 Unless they're very lost.

10 Q Would you turn to page 9, please. At
11 the top of the page in Section B, you report on
12 some new modeling that Sunrise and the staff have
13 done. And you have, this modeling used the new or
14 current REL for acrolein. Is it possible we can
15 help the committee here and say that we now agree,
16 that you agree that the current REL for acrolein
17 is the appropriate REL to use for those people to
18 whom you believe it applies?

19 A Yes.

20 Q Okay. Would you turn to page 13,
21 please. At the bottom of the page, the second
22 last sentence on the page. You say that when
23 Sunrise remodeled the turbine impacts using the
24 new RELs with appropriate emission rates and
25 meteorologic data, the acute THI is 0.54.

1 Now, I first want to clarify that THI is
2 exclusively from turbine emissions; is that right?

3 A Yes.

4 Q And I take it that since this is the
5 same number that the staff came up with, that you
6 agree with the staff that the acute non-cancer THI
7 is 0.54 for power plant operation?

8 A Yes.

9 Q Okay. Would you turn back to page 10,
10 please.

11 A Again, I should point out, though,
12 that's at the point of maximum impact.

13 Q I understand that.

14 A Which is in the intensively developed
15 oil field.

16 Q Right.

17 A Where did you want me to go next?

18 Q Page 10, please. In paragraph one
19 there, in the section describing CARB method 430,
20 in the second sentence you say that it's not clear
21 that these results -- referring to the results Dr.
22 Fox has testified about -- were ever published in
23 a peer review scientific journal where the data
24 and methodology would receive the full scrutiny of
25 the scientific community.

1 Did you do any independent investigation
2 to locate the available published research on the
3 degradation of acrolein?

4 A No, I did not.

5 Q I'd like to show you a 1986 paper from
6 the International Journal of Environmental
7 Analytic Chemistry, authored by Sylvestre Tejada.
8 Are you familiar with this paper?

9 A No, I'm not.

10 Q For the record, the title of this paper
11 is, Evaluation of silica gel cartridges coated in
12 situ with acidified 24 -- and then it has the
13 chemical name which is commonly known as DNPH --
14 for sampling aldehydes and ketones in air. The
15 point is that there --

16 COMMISSIONER MOORE: Is that a widely
17 disseminated paper in the industry?

18 MR. JOSEPH: Dr. Fox will testify
19 specifically about it. The point is that there is
20 indeed peer group research on this topic.

21 COMMISSIONER MOORE: More than this one
22 document?

23 MR. JOSEPH: Dr. Fox will explain a
24 number of items that are in the scientific
25 community regarding degradation of acrolein.

1 BY MR. JOSEPH:

2 Q So I take it, Mr. Stein, you're not
3 aware of any other publications concerning the
4 degradation of acrolein. Is that correct?

5 A I'm aware of the material that was
6 provided in the record. They're in -- in the --
7 all in the proof of service by the labor unions.

8 Q You're referring to the January 3rd
9 testimony of Dr. Fox; is that right?

10 A Yes.

11 Q And prior to that, when you wrote your
12 testimony you were not aware of any other
13 publications; is that right?

14 A I think there was something that was
15 provided as an exhibit to the comments on the
16 Preliminary Staff Assessment, which may have been,
17 I believe it was, a different document. So those
18 are -- those are the two documents that I'm
19 familiar with on this topic.

20 Q So the sole source of your information
21 on this topic has come from CURE?

22 A Yes. We saw no reason to ferret it out,
23 because we went to the state endorsed registry for
24 air toxics emission factors, and consulted that
25 database, and there was no user warning that said

1 beware, this emission factor underestimates by a
2 factor of 10, so you should multiply the emission
3 factor by a factor of 10 when you apply it for
4 risk assessment work.

5 Q Thank you. So you're not aware of any
6 activity by CARB to revise Method 430 with respect
7 to acrolein then, are you.

8 A No, I'm not.

9 Q Have you discussed the degradation of
10 acrolein with anybody at CARB?

11 A I have not, no.

12 Q I take it from the testimony that you
13 just offered that you -- or, at least you have
14 some familiarity with EPA Method TO-11A; is that
15 right?

16 A I am generally aware that there is a
17 method TO-11. I am not aware of all of the ins
18 and outs of that method, but I -- I do know that
19 it uses a similar substance for -- for collecting
20 acrolein.

21 Q But you're not familiar enough with that
22 method to know whether or not EPA has issued any
23 warnings with respect to the use of Method TO-11A
24 for collection of acrolein?

25 MR. GALATI: I'd just like to point out,

1 I want to make sure the record's clear. I think
2 Mr. Stein to TO-11. I don't know if TO-11A is
3 different than TO-11.

4 MR. JOSEPH: Let's ask Mr. Stein.

5 BY MR. JOSEPH:

6 Q Are you familiar with EPA Method TO-11A?

7 A I'm also aware that there is a TO-11A,
8 and I presume it's -- it's an upgrade of TO-11.

9 Q Okay. Let's go back to my previous
10 question, then. I take it that you're not aware
11 of any warnings that EPA has made with respect to
12 the use of Method TO-11A for collection of
13 acrolein?

14 A I vaguely recall, when I checked the
15 compendium, that there was a memorandum -- I think
16 a comment letter that was filed by a party
17 recommending against the use of that method for
18 acrolein, and perhaps other substances. But I --
19 my recollection is a little fuzzy.

20 Q You didn't mention that in your
21 testimony, did you?

22 A No, I did not.

23 Q Now, you read several portions of
24 Exhibit 74, which apparently Dr. Fox has authored.
25 You agree that hydrogen sulfide is a toxic air

1 contaminant, don't you?

2 A At high enough levels, just about
3 anything can be toxic. Yes, H2S is toxic at -- at
4 very high levels.

5 Q And I'm certain that you agree that
6 there is a state ambient air quality standard for
7 hydrogen sulfide.

8 A Yes, I'm aware that there is a state
9 standard.

10 Q And you agree that there are health
11 effects, human health effects from exposure to
12 hydrogen sulfide?

13 A Yes. And I believe the state standard
14 is based on an odor threshold. So that -- that's
15 the level at which folks can generally smell H2S.
16 I think that's -- that's the regulatory action
17 level, or health effect there.

18 Q One more topic, Mr. Stein.

19 A Sure.

20 Q You stated in your testimony that
21 there's nothing unique about this project as
22 compared to other siting projects that the
23 Commission has and is evaluating.

24 MR. GALATI: Again, I would object to
25 the mischaracterization of his testimony. He

1 stated that there is nothing unique about the
2 construction equipment used on this project versus
3 others. Not about the project.

4 HEARING OFFICER FAY: Sustained.

5 BY MR. JOSEPH:

6 Q When you refer to construction
7 equipment, are you including drill rigs?

8 A Some -- the Sunrise Cogeneration and
9 Power Company will not be drilling any wells.

10 Q So your statement about construction
11 equipment not being unique was limited to the
12 equipment that will be used to construct a power
13 plant, and did not include the construction of new
14 wells. Is that right?

15 A Yes.

16 Q And the construction of new wells is a
17 factor which is different in this project from
18 every other power plant case which the Commission
19 has recently acted on, or has pending before it.
20 Is that right?

21 A I would agree that that aspect of the
22 case is different, but the equipment that is used
23 for the drilling of wells are just other pieces of
24 internal combustion equipment, and while they may
25 not have wheels, they use internal combustion

1 engines and their emission characteristics would
2 be, I would expect, fairly similar.

3 Q You're not saying there's no difference
4 between an engine on a drill rig and an engine on
5 a bulldozer, are you?

6 A I'm saying that they're -- they're
7 similar devices. They may -- there may be some
8 differences, and a particular one is -- is on a --
9 on a piece of mobile equipment that is moving
10 around and being subjected to varying loads. And
11 -- and I don't know enough about how a drill rig
12 works to know whether it -- it is loaded and
13 unloaded in the same manner.

14 Q You --

15 A But they -- but they both use internal
16 combustion engine, they both use the same fuel.

17 Q But you can't offer an expert opinion
18 about the emission impacts of a drill rig as
19 compared to a dozer, can you?

20 MR. GALATI: Again, I object. Emission
21 impact's too vague. He's been qualified to render
22 an opinion in air quality on the emission impacts.
23 If you want to say with respect to --

24 MR. JOSEPH: I'm being very specific,
25 actually. I'm talking about the emissions from

1 drill rigs.

2 MR. GALATI: And are you talking about
3 being able to quantify those emissions, or exactly
4 what's in those emissions, or exactly with respect
5 to the loading, what would happen with different
6 loading?

7 HEARING OFFICER FAY: Mr. Galati. Where
8 is this going?

9 MR. JOSEPH: The witness testified that
10 there's nothing unique about the construction
11 equipment. Where I started out was on the
12 assumption that I was going to get an answer
13 saying I was talking about the mobile construction
14 equipment, which is the same on this project, or
15 similar in this project as to the other siting
16 projects. And I was assuming that the witness was
17 going to agree with me that, in fact, well
18 drilling equipment is different from mobile
19 construction equipment, and he was not referring
20 to that when he said there's nothing unique about
21 this project.

22 HEARING OFFICER FAY: I'll allow the
23 question. Go ahead.

24 BY MR. JOSEPH:

25 Q Mr. Stein, can we short circuit this.

1 Can you agree that well drilling equipment is
2 different from mobile construction equipment?

3 A Well drilling equipment is different
4 from mobile -- mobile equipment, yes.

5 MR. JOSEPH: Thank you. That's all the
6 questions I have.

7 HEARING OFFICER FAY: Any redirect, Mr.
8 Galati?

9 REDIRECT EXAMINATION

10 BY MR. GALATI:

11 Q Mr. Stein, on cross examination I
12 believe Mr. Joseph asked you a question regarding
13 the acute THI for turbine emissions that you
14 calculated of 0.54. Do you remember that?

15 A Yes.

16 Q And that was based on using the new REL;
17 is that correct?

18 A Yes.

19 Q Do you agree that that represents the
20 true hazard index at the maximum point of impact?

21 A Well, I would -- I would simply point
22 out that the maximum impact occurs in the
23 intensively developed oil field, so while that --
24 an REL of -- or a total hazard index of .54 is a
25 very conservative calculation. It would be more

1 appropriate to perform a calculation using a work
2 -- worker exposure standard, since the individuals
3 that would be likely -- that most likely would be
4 exposed at that location are, in fact, workers.

5 MR. GALATI: No further questions on
6 redirect.

7 HEARING OFFICER FAY: Any recross on
8 that question?

9 MR. JOSEPH: No, Your Honor.

10 HEARING OFFICER FAY: Okay. Thank you,
11 Mr. Stein.

12 MR. GALATI: And just to point out that
13 the -- Mr. Worl will be available for any
14 additional work on worker safety, as well. I
15 don't have any affirmative testimony right now.

16 HEARING OFFICER FAY: Okay.

17 MS. HOLMES: Will Mr. Worl be available
18 on Thursday?

19 MR. GALATI: Yes, unless we cover his
20 issue today. I'm just guessing as what we might
21 do today, but he's planning to be here on
22 Thursday, as well.

23 MS. HOLMES: I have a -- just a
24 procedural question. Will Sunrise at some point
25 be offering anything with respect to Safety 1?

1 There was some discussion at the last hearings
2 about a --

3 MR. GALATI: Yes. And --

4 MS. HOLMES: Will that be on Thursday?

5 MR. GALATI: Yeah, I intended to do that
6 on Thursday.

7 HEARING OFFICER FAY: Okay. Staff, are
8 you ready to go ahead on Public Health?

9 MR. JOSEPH: Mr. Fay, before the staff
10 goes, I wonder if Mr. Galati intended to move the
11 admission of 73, which was marked after he moved
12 his exhibits in. Mr. Stein's testimony.

13 MR. GALATI: I --

14 HEARING OFFICER FAY: We -- after we
15 labeled he did move it into evidence.

16 MR. GALATI: Yeah, I intended that to be
17 moved in.

18 HEARING OFFICER FAY: Is there
19 objection, in case there's some confusion?

20 MR. JOSEPH: No.

21 HEARING OFFICER FAY: I hear none.
22 Exhibit 73 is moved in.

23 (Thereupon, Exhibit 73 was received
24 into evidence.)

25 HEARING OFFICER FAY: Exhibit 74 is not

1 entered into evidence, it's just marked for
2 identification.

3 Ms. Holmes.

4 MS. HOLMES: Staff's witnesses are Dr.
5 Odoemelam and Mr. Tyler. I believe Mr. Tyler has
6 already been sworn, but Dr. Odoemelam has not. Is
7 that correct?

8 DR. ODOEMELAM: Yes.

9 HEARING OFFICER FAY: Please swear the
10 witness.

11 (Thereupon, Obed Odoemelam was, by the
12 court reporter, sworn to tell the truth
13 and nothing but the truth.)

14 MS. HOLMES: And what I'd like to do now
15 is have the exhibits marked for purposes of the
16 hearing.

17 The first is a document entitled Public
18 Health Testimony of Obed Odoemelam and Rick Tyler.
19 It was filed as part of the FSA Part 3.

20 HEARING OFFICER FAY: Exhibit 75.

21 (Thereupon, Exhibit 75 was marked
22 for identification.)

23 MS. HOLMES: And the second document was
24 filed January 3rd. It's entitled Worker Safety
25 and Fire Protection Supplement Testimony of Rick

1 Tyler.

2 HEARING OFFICER FAY: That's Exhibit 76.

3 (Thereupon, Exhibit 76 was marked
4 for identification.)

5 TESTIMONY OF

6 OBED ODOEMELAM AND RICK TYLER

7 called as witnesses on behalf of the Commission
8 Staff, having first been duly sworn, were examined
9 and testified as follows:

10 DIRECT EXAMINATION

11 MS. HOLMES: Dr. Odoemelam and Mr.
12 Tyler, did you prepare the documents that have
13 just been identified as Exhibit 75 and Exhibit 76?

14 MR. TYLER: Yes.

15 DR. ODOEMELAM: Yes, we did.

16 MS. HOLMES: And were statements of your
17 qualifications included in the FSA Part 3?

18 MR. TYLER: Yes.

19 DR. ODOEMELAM: Yes, they were.

20 MS. HOLMES: And do you have any
21 corrections at this point to your testimony?

22 DR. ODOEMELAM: Yes, I have a couple of
23 corrections. The first is on page 6, because in
24 my -- what I intended to say, on page 6, is in
25 last part of complete paragraph. The last

1 sentence reads, B, the types of health impacts
2 that could result from the exposure to these
3 pollutants. Staff concludes exposure would not
4 cause insignificant -- I mean, significant.

5 The next is on page 12. The third
6 paragraph from the top, the last sentence reads,
7 the Sunrise Project would be unlikely -- it's
8 written unlike. It's unlikely to add to
9 significant -- to significantly add to the area's
10 cancer burden is missing.

11 And then the next paragraph, the second
12 line, the sentence reads, while CURE, like staff,
13 does not consider the emissions from the proposed
14 project as posing a significant cancer -- cancer
15 risk, it's also of cancer. So cancel the second
16 of cancers.

17 And then on page 13, the first
18 paragraph, there is the significant impacts as
19 reflected in the -- is written 0.02 value, but
20 it's 0.2.

21 And then the next -- the third
22 paragraph, line -- line five, I think it is. The
23 sentence is -- it is on line -- the third line.
24 Since only oil field workers will be found at this
25 location, the potential for significant -- for

1 significance should best be assessed. After that
2 it should be for perspective.

3 HEARING OFFICER FAY: Could you repeat
4 that, please?

5 DR. ODOEMELAM: Okay. The sentence
6 should read, since only oil field workers will be
7 found at this location, the potential for
8 significance should best be assessed, and after
9 that it says using the applicable work standards.
10 Before -- after assessed, you should add, for
11 perspective.

12 HEARING OFFICER FAY: For perspective?

13 DR. ODOEMELAM: It should be assessed
14 for -- for the purpose of providing prospective.

15 HEARING OFFICER FAY: Oh, for the
16 purpose of.

17 DR. ODOEMELAM: Yes, sir.

18 And I think the last correction is on
19 page 15. The first complete paragraph, the sixth
20 line from the bottom. The sentence is, after such
21 reduction -- and there is a phrase here that says,
22 this is done.

23 MR. JOSEPH: I'm sorry, I -- you lost
24 me. Where are you? I got it. Okay.

25 DR. ODOEMELAM: Okay. The --

1 HEARING OFFICER FAY: Could you repeat
2 the directions again? Which --

3 DR. ODOEMELAM: Okay. It's on page 15.

4 HEARING OFFICER FAY: Yes.

5 DR. ODOEMELAM: The first paragraph.

6 HEARING OFFICER FAY: First full
7 paragraph?

8 MS. HOLMES: The partial paragraph.

9 HEARING OFFICER FAY: Partial paragraph.

10 DR. ODOEMELAM: First partial paragraph,
11 that is. It should go from line six from the
12 bottom of that paragraph. It says, after such
13 reduction, and it says this is done. So -- so
14 just strike this is done. It's after this is done
15 after such reduction.

16 Those are all the corrections that I
17 have. Except on page 17. Just another minor one.

18 (Laughter.)

19 DR. ODOEMELAM: The paragraph on
20 conclusions. It's line one, two, three, four,
21 five -- line five from the bottom. Before -- the
22 sentence under two reads, emissions from the
23 project's turbines and three emissions from oil
24 field operations -- and there's an and dangling
25 there. So please remove that.

1 Those are all the major corrections that
2 I have.

3 MS. HOLMES: Do you perhaps have a minor
4 correction on page three, under method of
5 analysis? Do you wish to remove the reference to
6 cooling towers?

7 DR. ODOEMELAM: Yes, I do.

8 MS. HOLMES: Does everybody know where
9 that is? Why don't you explain it for them.

10 DR. ODOEMELAM: It's on page three.

11 MS. HOLMES: In the first paragraph,
12 under method of analysis.

13 DR. ODOEMELAM: Yes. And toxic is on --
14 one, two, three -- the fourth line from the top.
15 The last part of the sentence, and toxic chemicals
16 from the cooling towers. That should be deleted,
17 because cooling towers do not apply to this
18 project.

19 Those are all the corrections that I
20 have.

21 MS. HOLMES: And with those corrections
22 are the facts contained in your testimony true and
23 correct?

24 DR. ODOEMELAM: Yes, they are.

25 MS. HOLMES: And do the opinions in the

1 testimony represent your best professional
2 judgment?

3 DR. ODOEMELAM: Yes, they do.

4 MS. HOLMES: And now what I'd like to do
5 is to have Mr. Tyler and Dr. Odoemelam summarize
6 the results of both the Public Health and the
7 supplemental Worker Safety testimony.

8 I'd like to ask you please to start by
9 focusing on the different scope of the two
10 disciplines.

11 MR. TYLER: As directed by the
12 committee, I -- we prepared a testimony to
13 basically describe the differences between the
14 regulatory frameworks that exist for worker
15 protection versus public protection. That's
16 what's included in the supplemental testimony.

17 Basically, there are -- there are many,
18 many differences associated with -- there are two
19 entirely different regulatory programs, and many
20 different aspects of how you regulate exposure to
21 workers versus the public.

22 Some of these -- some of the more
23 important ones are that in general, the -- the
24 public is awarded, or is -- is basically granted a
25 higher standard of protectiveness from exposure to

1 pollutants. There are also major differences in
2 the population that's exposed.

3 To give you an example. If you take the
4 general population you generally have a population
5 that includes people who are chronically ill, you
6 have infants, you have people who are very old,
7 and as a result of that you have a much more
8 diverse population who are potentially exposed.
9 We don't generally see the chronically ill, or
10 infants, or many of these sensitive subgroups in
11 the workplace.

12 Generally, those employed in the
13 workplace are adult males, or adult females. They
14 tend -- adults, healthy adults tend to be among
15 the least sensitive segments of the general
16 population.

17 To give you an idea on the standards of
18 protection, the -- the requirement under the
19 ambient air -- the Clean Air Act for adoption of
20 ambient air quality standards requires that all
21 members that -- that the administrator of EPA
22 determine that all members of the exposed
23 population be protected with an adequate margin of
24 safety. Whereas the standard of protection for
25 workers is that insofar as is practical, that no

1 employee will suffer diminished health function,
2 capacity, or life expectancy as a result of their
3 work.

4 This includes no requirement for a
5 margin of safety. The margins of safety that are
6 typically applied when developing things such as
7 the REL are between one and a thousand, depending
8 on the quality of the data.

9 COMMISSIONER MOORE: One in a thousand?

10 MR. TYLER: In other words, you would
11 divide the number that you found in the actual
12 study by a factor of between one and a thousand.
13 If you had very poor data on a limited number of
14 end points such as maybe lethality in rodents, and
15 you were going to extrapolate that to a safe level
16 of exposure for humans, you would divide by a
17 factor of a thousand. If you had very good
18 quality data on a very large number of human
19 experiments for relatively minor end points of
20 toxicity, you might divide by a factor of one.

21 So that fact alone, the two -- the two
22 factors that I've just talked about can result in
23 differences in the exposure criteria. Or, in
24 other words, the criteria that you use to assess
25 the relative importance, or the relative

1 acceptability of exposures to workers or the
2 public can be as much as -- as a thousandfold
3 difference from one. Typically, most experts,
4 such as Dr. Calabrese, who's done probably the
5 lion's share of the work in that area, but I've
6 seen other -- other documents addressing this,
7 typically differences in sensitivity between the
8 most sensitive humans and the least sensitive
9 humans is thought to be about a factor of ten.

10 So you can see there are very large
11 differences in exposure criteria, and that is in
12 fact what you're seeing in the two sets of
13 analyses here. If you use OSHA criteria or NIOSH
14 criteria to gauge exposure, there are orders of
15 magnitude higher, or allow orders of magnitude
16 higher exposure than would be allowed for a public
17 exposure.

18 Another major difference, and one that's
19 not fully incorporated in the analysis done by
20 CURE, is the difference -- the different -- in
21 exposure regimen. Workers are generally present,
22 or the general assumption for evaluating workplace
23 exposure is that the people -- that people will be
24 exposed eight hours a day, 40 hours a week, over
25 the 52 weeks a year. While there is some

1 adjustment in their analysis for -- for parts of
2 that, they didn't appear to deal with the number
3 of hours in the day.

4 These, and I -- I provide analysis,
5 these can make a relatively large difference, as
6 well, in how you assess exposure, regardless of
7 what criteria you're using. Because what you have
8 to do is -- is establish the amount of time that
9 people are exposed. If you're doing a cancer risk
10 analysis, the ultimate risk is tied directly to
11 the duration of exposure. So the duration of
12 exposure becomes very critical to your ultimate
13 conclusion.

14 Another major difference are the
15 differences in cost benefits and consent. In the
16 workplace, such as this oil field, workers derive
17 a significant benefit, gainful employment, from
18 the fact that they accept certain risks associated
19 with being present in that workplace. That's not
20 the case with the general public. In -- in
21 general, a facility that emits to the general
22 public, they are -- that is generally imposed upon
23 them and they may not have any significant
24 benefit. While in the case of power plants, we
25 all do utilize the power, so we all do have a

1 necessity to consume electrical energy, or most
2 people do, anyway.

3 Another aspect is consent. Any -- any
4 time you expose a worker to a toxic pollutant, the
5 law requires that you inform them of that exposure
6 and that you inform them of the consequences, the
7 potential consequences of that exposure. Thus,
8 any employee who decides that they don't want to
9 accept the risk of exposure to maintain that
10 employment can go elsewhere and seek employment.

11 So the bottom line is, there are large
12 differences in cost benefits and the amount of
13 knowledge that the person has, or ability to avoid
14 exposure if they choose to do so.

15 Another major difference is
16 applicability of mitigation measures, or methods.
17 We would not ask the public to wear protective
18 equipment such as respirators, nor is it
19 appropriate. And, however, those -- those types
20 of mitigation are directly applicable to -- to the
21 workplace. If, for instance, we're cleaning up a
22 hazardous waste site and you find that the
23 concentrations are above acceptable risk levels,
24 then the person conducting that cleanup can
25 require the use of respirators for those

1 employees, thus completely eliminating significant
2 -- potentially significant exposures. Those are
3 not options that we have in -- in exposing the
4 public.

5 There's also some differences in -- in
6 the engineered and administrative controls.
7 Obviously, if -- if we're in a workplace
8 environment we can have access to protective
9 equipment and we also have access to better --
10 better control over any necessity for evacuation,
11 or removing the employees from an exposure
12 situation than we would have with the public.

13 All in all, I think the most important
14 thing that I'm trying -- the most important
15 distinction that I'm trying to make with this is
16 we can't mix those two environments.

17 In this case, in the Sunrise Project, we
18 start out with the possibility that we have
19 workers present at the site during a cleanup.
20 Then we have workers present during a construction
21 phase. Then we have workers present during an
22 operational phase. We also have the potential
23 that other workers may be exposed offsite, and
24 each one of those is -- is a very different
25 situation.

1 The workers that would come to a -- in
2 my opinion, in my expert opinion, any worker that
3 -- that was employed to do a site cleanup in
4 hazardous -- to remove hazardous -- hazardous or
5 contaminated areas, would wear appropriate
6 protective equipment. We would not have anyone
7 who's doing a site cleanup bare-skinned, shoveling
8 wet dirt, or using their hands in wet dirt. I
9 would not expect that there would be significant
10 potential for dermal exposure or other exposure
11 routes which have been contended otherwise.

12 So we need to keep these -- these
13 separated into their appropriate boxes. Once
14 we've done the cleanup, there's no longer the
15 potential that the earth moving equipment that
16 comes after the cleanup would disturb dirt that is
17 contaminated at the wells, that are suggested in
18 CURE's testimony.

19 So then, for a minute, let's examine the
20 -- the issue of the workers that are present
21 offsite. The oil field workers. The -- the
22 exposures to dermal exposure or ingestion,
23 inadvertent ingestion, that are suggested, are
24 suggested through guidance that was provided for
25 doing risk assessments that was discussed earlier.

1 And if you read that guidance carefully, what
2 they're talking about is -- I guess it was
3 actually EPA guidance that was provided at the
4 last hearing -- if you read that guidance
5 carefully, what they're talking about is exposure
6 of workers on the site after a cleanup occurs.
7 And they're specifically talking about the
8 potential for people doing landscaping and those
9 sorts of activities, where they're obviously
10 unaware of the fact that they may be handling
11 contaminated soil.

12 I would -- I would believe, under those
13 circumstances, that yes, dermal exposure could
14 occur, and that ingestion could occur, as is
15 suggested. Not during -- not during a cleanup of
16 a -- of contaminated soils. I think that's a
17 completely unreasonable assumption.

18 I believe it's also unreasonable to
19 believe that any of the oil field workers are
20 going to be digging in that contaminated soil and
21 would become exposed.

22 So those are some examples of -- of why
23 I believe it's inappropriate. I'd also like to
24 state that there's another concern I have with
25 regard to who we consider public and who we

1 consider workers. Virtually every facility that
2 we site, or at least the recent ones that I've
3 dealt with, are cogeneration facilities. Each one
4 of these cogeneration facilities ends up in the
5 center of an industrial post. This could've been
6 Procter and Gamble, or -- or Campbell Soup. If we
7 take the -- the interpretation of who's public
8 that's being suggested, we wouldn't have been able
9 to site any of those facilities.

10 And I believe the same exact
11 circumstance exists here. Texaco is a host
12 facility for a cogeneration facility that sits in
13 the middle of its property. As a result of that,
14 I believe Texaco is absolutely required to inform
15 their employees of the risks that are associated
16 as a result of that host being on their property.
17 So I believe clearly that those oil field workers
18 are workers. They fall under worker protection
19 criteria.

20 Further, I -- I don't believe that it's
21 appropriate to use risk assessment to evaluate
22 workers in general. The only time I believe that
23 would be appropriate is -- is where we know we
24 have a contaminated site, where it's been
25 designated as a contaminated site, and where we're

1 -- where we're analyzing, then, to establish the
2 risks or doing some sort of health and safety
3 program under the Haz Walker requirements.
4 Otherwise, we -- we stick to the general workplace
5 exposure criteria. Those are what's appropriate
6 for the construction phase of this project.

7 I believe those are what's appropriate
8 for the outside oil field workers, and they're
9 appropriate for everything except possibly the
10 cleanup, the actual site cleanup activities where
11 -- where we would maybe do some sort of risk
12 assessment, but it would be for different
13 purposes. We would not use the -- the suggested
14 guidelines as EPA. Those guidelines apply to the
15 end use of the property. Things like gardeners
16 being present.

17 With that, I would like to go just
18 briefly to the appendix I prepared for the health
19 testimony and summarize why I did that.

20 The appendix which I prepared for the --
21 or Appendix A, is a screening level risk
22 assessment. The reason I did this is just to --
23 to bring home some of the points I just made in
24 this testimony.

25 When I use -- even if I use public

1 protection criteria, when I adjust them for -- to
2 reflect the appropriate exposures, those exposure
3 durations, and all the other factors that I
4 believe are appropriate, you find that, in fact,
5 we still don't have a significant risk, even if we
6 consider them to be members of the public, based
7 on using appropriate assumptions in our analysis.

8 The one exception I guess I -- I would
9 take with the analysis I did here, and I would
10 agree with CURE's assertion of that, although I've
11 never seen it before done that way, is that it
12 appears that EPA, in developing the -- the -- as a
13 -- PRGs, had used the 30 year exposure period.
14 Virtually always, when I've seen cancer risk
15 assessment done for any purpose they've used a
16 seven year exposure. That's in virtually every
17 one of their health risk assessment documents for
18 every compound I've ever looked at. But for
19 whatever reason, they chose to use 30 years in
20 developing these criteria. So I would agree with
21 that.

22 However, even if I make those
23 corrections, it makes no difference. I still come
24 to the same conclusion that there's no significant
25 potential risk as a result of this project.

1 MS. HOLMES: Before I have Dr. Odoemelam
2 summarize his portion of the health testimony, I'd
3 just like to ask one or two quick questions.

4 You engaged in some discussion about how
5 you treat workers and the public differently.
6 Could you please explain the criteria that you use
7 to determine who's a worker versus who's a member
8 of the public, since that seems to be a part of
9 some of this debate.

10 MR. TYLER: In general, what I would --
11 what I -- again, based on what I said earlier, if
12 I -- if we come to the conclusion that in fact the
13 workers derive some benefit from the activities,
14 or they're part of the contiguous industrial
15 operation, or they are exposed to similar risks
16 routinely in an industrial area, then I would
17 treat those individuals as workers.

18 There have been cases where I did not
19 treat workers -- workers on another site by the
20 same criteria that I -- that I did the -- the
21 actual facility. For example, in the case of the
22 Procter and Gamble facility, there was a warehouse
23 across the street. Clearly, the workers in the
24 warehouse are not doing a similar activity.
25 They're not exposed to the same sort of risk, nor

1 do they have gainful benefit as a result of -- of
2 this plant. In other words, they were independent
3 of it, they're in a different work activity, they
4 don't routinely accept those risks, and therefore
5 I treated them as members of the public.

6 MS. HOLMES: So would it be fair to say
7 that you would look at drawing the line as to
8 whether somebody is a worker or a member of the
9 public at the property line is an artificial
10 distinction?

11 MR. TYLER: Yes, I believe it is.

12 MS. HOLMES: And you stated that you
13 typically do not use a health risk assessment to
14 evaluate worker effects?

15 MR. TYLER: That's correct.

16 MS. HOLMES: Do you typically rely on
17 worker standards that are promulgated by agencies
18 that have authority over those standards?

19 MR. TYLER: Yes, I do.

20 MS. HOLMES: And is it true that those
21 agencies set standards that cannot exceeded?

22 MR. TYLER: That's correct.

23 MS. HOLMES: Thank you. Have you read
24 CURE's testimony on worker safety in which they
25 included a health risk assessment?

1 MR. TYLER: Yes, I did.

2 MS. HOLMES: Would you like to -- I
3 don't know, it hasn't been marked yet as an
4 exhibit.

5 MS. POOLE: Can we deal with this on
6 Thursday?

7 MS. HOLMES: We'd rather do it now.
8 That's why we wanted to have all of the testimony
9 on --

10 MS. POOLE: Well, this was scheduled for
11 Thursday, and we're not prepared to address it
12 today. We've stated that. This doesn't seem to
13 relate to public health.

14 MS. HOLMES: It -- well, it's a health
15 risk assessment, which is something that we
16 typically consider a public health tool.

17 This is just a problem with dealing with
18 them separately. We're all talking about health
19 risk assessments, we're all conversant, I think,
20 now with the terms and the words and what the
21 issues are. I don't like to have to divide it up.

22 HEARING OFFICER FAY: Ideally, this
23 would've all been back to back. And I take
24 responsibility for that.

25 Can Mr. Tyler be available on Thursday?

1 MS. HOLMES: Yes, he can.

2 HEARING OFFICER FAY: Would you be
3 willing to speak to this at that time?

4 MR. TYLER: Sure.

5 MS. HOLMES: All right. I'll move on to
6 another question.

7 Earlier in your conversation you talked
8 about CURE's assessment of the health risk
9 assessment that you performed in this testimony.
10 Were you in the room yesterday when there was a
11 discussion about particulate emissions?

12 MR. TYLER: Yes, I was.

13 MS. HOLMES: And does that have an
14 effect on a health risk assessment?

15 MR. TYLER: Yes, it would.

16 MS. HOLMES: And were you here when CURE
17 testified, I believe, that the particulate
18 emissions that were presented in the staff's
19 testimony or the Applicant's testimony needed to
20 be increased by a factor of 59?

21 MS. POOLE: I object to that
22 mischaracterization of the testimony. I believe
23 what Dr. Fox said was that if you look at the
24 Applicant's analysis and you -- you correct for
25 the errors that they made, then you would need to

1 multiply that by -- I believe it was a factor of
2 59.

3 MS. HOLMES: Do you recollect that
4 discussion, Mr. Tyler?

5 MR. TYLER: Yes, I do.

6 MS. HOLMES: If you were to use those
7 assumptions in your health risk assessment, would
8 it affect the conclusions that you reached?

9 MR. TYLER: No.

10 MS. HOLMES: Are you familiar with
11 amendments that staff filed to its air quality
12 testimony -- and I apologize, I don't recollect
13 the exhibit number. This was on the soot filters.
14 Do you recollect that testimony?

15 MR. TYLER: Yes.

16 MS. HOLMES: Does that have any effect
17 on the conclusions you've reached on your
18 testimony?

19 MR. TYLER; No, it would not. We
20 would've reached the same conclusion regardless of
21 whether there was a requirement for soot filters.

22 MS. HOLMES: And finally, I have a
23 couple of questions to Mr. Tyler that are in the
24 nature of rebuttal to testimony that was provided
25 yesterday on H2S measurements. Our air quality

1 expert who testified yesterday doesn't have any
2 experience in this area, and Mr. Tyler does.

3 MR. TYLER: And these H2S measurements
4 are also part of the public health. They relate
5 to the public health arguments, as well.

6 MS. HOLMES: Were you here yesterday
7 when there was testimony about H2S measurements?

8 MR. TYLER: Yes, I was.

9 MS. HOLMES: Do you -- do you have a
10 reaction to what you heard about how the
11 measurements were taken?

12 MR. TYLER: Yes, I do. I did source
13 testing for years with the California Air
14 Resources Board. I was also -- I was also
15 responsible for developing the continuous emission
16 monitoring regulation model rule for -- for ARB,
17 and was responsible for development of their
18 regulations regarding the certification of
19 independent laboratories.

20 What I heard yesterday was the gentleman
21 say first off that there was no reference method
22 for H2S. That's wrong. There is a reference
23 method for H2S. ARB does not adopt standards
24 without reference methods. When you compare any
25 exposure or any ambient concentration that -- and

1 you're using an ambient air quality standard, you
2 need to be cognizant that that applies to
3 measurements by the reference method. When you
4 use a standard, you have to make your measurements
5 based on the reference method.

6 Further, I had a serious concern with
7 the idea that -- and I've seen this cause numerous
8 problems in the past with taking these types of
9 measurements -- that the individual relied on the
10 manufacturer to calibrate the instrument, and that
11 there was no calibration done in the -- in the
12 timeframe of the actual measurements.

13 Any time we did an analysis at ARB, for
14 any purpose, we measured, we first introduced a
15 standard at the start of the measurement period,
16 and introduced a standard at the end of the
17 measurement period. We could therefore be certain
18 that what we measured during the period we were
19 taking measurements was, in fact, appropriate, and
20 it was not a result of errors associated with
21 calibration of the instrument.

22 Just for verification purposes, that
23 should always be done. I would never accept any
24 analysis that didn't include standardization
25 before and after the measurement, under any

1 circumstance.

2 Furthermore, any time you do a
3 measurement like this, the standard has to be
4 traceable to an NBS, or a common reference such as
5 NBS. When we did measurements at ARB, we either
6 used standards that were directly from NBS, or we
7 checked every standard we used as traceable to NBS
8 and never relied, at any time, on a manufacturer's
9 assertion that it was traceable.

10 In light of -- of that -- and further,
11 we asked them about interferences. That's also a
12 major part of a reference method. If you're going
13 to make a measurement and you're going to compare
14 it to a standard, you need to make sure that the
15 method doesn't have interferences. A 30 percent
16 response to another compound is what I heard
17 stated here. It's grossly unacceptable. We would
18 -- unless you absolutely eliminate the possibility
19 that that could be present, and I didn't hear that
20 those sort of precautions were taken in doing this
21 -- in doing this analysis.

22 My opinion would be, as having done a
23 considerable amount of testing, that I would not -
24 - I would not accept this data in any way, shape,
25 or form as being valid.

1 MS. HOLMES: Finally, are you familiar
2 with Dr. Fox's testimony regarding the acrolein
3 measurements?

4 MR. TYLER: Yes.

5 MS. HOLMES: And in your experience
6 doing source testing, do you believe that -- do
7 you believe her statement that typically one to
8 two weeks elapses between collection and analysis
9 of samples?

10 MR. TYLER: Generally, when we did these
11 types of analyses at ARB, and I did do them
12 frequently in refineries and other types of
13 places, we did not wait any significant amount of
14 time. Typically, particularly if we had any
15 concerns for degradation, those -- those analyses
16 were taken to the laboratory virtually the next
17 day, or as soon as we could get them.

18 MS. HOLMES: Thank you.

19 Now I'd like to ask Dr. Odoemelam to
20 briefly summarize the public health portion of the
21 testimony.

22 DR. ODOEMELAM: Thank you.

23 First, I would like to deviate somewhat
24 from normal practice by paying my respects to our
25 colleagues at CURE. We think that they have done

1 a good job and attempted to help the Commission
2 staff go into issues of potential significance.
3 And we do really agree with CURE on a few issues.
4 But we think that their findings of significance
5 with regard to the project are really based on
6 very few issues.

7 I would like to point to them so that
8 CURE does not continue to raise -- to analyze or
9 to conduct the analysis the same way for other
10 projects. There are things that we cannot do as a
11 regulatory agency.

12 As noted in my analysis, we agree with
13 CURE that, first, there will be no significant
14 chronic impacts from construction activities. We
15 also agree that operations will not lead to any
16 significant cancer risk. These are as related to
17 emissions from the turbines.

18 But our disagreement really boiled down
19 to two pollutants, so that this does not appear as
20 if there is a big universe of pollutants about
21 which we disagree. All these concerns about
22 worker exposure versus public exposure relate to,
23 in the case of operations, acrolein. And the
24 reason for our disagreement with CURE is pretty
25 straightforward, and we are hoping that CURE does

1 not continue to use this approach not only for
2 this project, but for other projects.

3 CURE is not very correct by coming up
4 with specific studies and asking staff to adjust
5 upwards the emission factors for acrolein. This
6 is not how the regulatory agencies function. We
7 cannot sit here and wait for anybody to come up
8 with any research findings and ask us to make
9 adjustments on our own.

10 Another major headache for us is that
11 CURE is -- does not quite understand how best to
12 use these risk numbers. Now, these are from the
13 CAPCOA risk assessment document which Rick and I
14 helped develop, certainly the first edition of it,
15 in the 1980's. I am also a member of the
16 Interagency Risk Assessment Coordination Working
17 Group that was required by the last governor, so
18 that toxicologists from all agencies meet
19 occasionally to ensure that risk assessments are
20 conducted similar in all agencies.

21 CURE tends to believe that these
22 numbers, the numbers we get risk numbers, are just
23 absolute triggers for mitigation. We helped
24 develop these guidelines, and they are not
25 intended as such. Even these guidelines

1 themselves recommend that any risk assessor
2 consult with Cal-EPA in cases of findings that are
3 both specific thresholds, like when the threshold
4 limit -- when the hazard index values are more
5 than one. They don't necessarily trigger a
6 specific cause for mitigation, as CURE tends to
7 think.

8 So we are hoping that they modify this
9 approach, not only for this project, but for other
10 projects. If CURE thinks that the acrolein that
11 is at the root of our disagreement should be
12 analyzed separately, they should work with the ARB
13 so that the agency can make the appropriate
14 changes and subject them to comments by the
15 regulatory community -- the regulating community,
16 and by the general public. We recommend that they
17 not in this project attempt to apply this tenfold
18 multiplication.

19 When you add that to the fact that the
20 accurate reference level for acrolein has been
21 revised downwards by -- by Cal-EPA, you begin to
22 see how difficult it will be to find -- to approve
23 any project in any way.

24 Again, this is because CURE does not
25 quite understand the limitations of the risk

1 assessment process. CURE argues about exposure
2 assessment, but the minor calculations pale in
3 comparison with the toxicological underpinnings of
4 the revision of not only the constant potency
5 numbers, but also the reference exposure levels
6 themselves. So that these risk assessment numbers
7 are intended to provide guidelines, so that the
8 staff or any other agency using them has to put
9 this in some context.

10 As I indicated earlier, we do agree with
11 CURE in some areas. But our disagreement is
12 driven almost completely by their treatment of
13 acrolein. We are hoping that they stop using that
14 method. It is not appropriate, and they should
15 not expect the Commission staff to assess this --
16 the way they suggest, because that is not part of
17 the regulatory regimen.

18 COMMISSIONER MOORE: That's quite an
19 editorial comment. And I'll take it as such. I
20 suggest that it -- we've let it go to the
21 Commissioners on this committee, you may want to
22 reframe it in the form of a letter and send it to
23 the other Commissioners under the heading of this
24 is an editorial comment about the process
25 generally. And do you have specific comments that

1 you want to make on acrolein? No? Back to --

2 DR. ODOEMELAM: Oh, yeah. Well, our
3 findings for, again, the reason for CURE's
4 findings of impacts, I just threw that in to their
5 acrolein emissions almost for -- not only for
6 construction related emissions, but also for
7 operations. Emissions from the turbines.

8 There was an earlier reference to the
9 incremental risk of .54 as the -- or how that
10 index actually has in there for acrolein. Now,
11 according to the guidelines in the risk assessment
12 document, that calls for calculating another
13 hazard index number using several listed criteria
14 pollutants. And CURE has pointed -- has suggested
15 that staff do that, but they can't it both ways,
16 because the new reduced reference level is based
17 on eye irritation, while the referenced levels for
18 the other criteria pollutants are based on
19 respiratory irritation. So that making the
20 argument that the accurate hazard index for
21 acrolein then should call for addition of
22 reference levels for the other criteria pollutants
23 ignores the essence of the recommendations.

24 MR. TYLER: I think I'd like to clarify
25 that just real quickly, in that when you do a

1 hazard index you have to -- you need to keep --
2 you need to be cognizant that you're -- you're
3 applying a index for each target organ. And
4 clearly, that's discussed by DHS in their
5 guidance. So if -- if you have a end point of
6 toxicity that's mild eye irritation, you don't --
7 you don't add that to a respiratory -- you don't
8 add that in the index for respiratory function.

9 So in other words, if you were going to
10 do one for respiratory function you have to go
11 back and develop some other criteria to use for
12 the respiratory -- for the respiratory effect. So
13 you can't mix, you can't willy-nilly mix target
14 organs. And that's discussed. They -- they give
15 actually a matrix of that. And actually, I worked
16 with Melanie a bit on that when she was working
17 here at the Commission.

18 MS. HOLMES: I think we should proceed
19 to cross examination now.

20 HEARING OFFICER FAY: All right. That
21 concludes your summary.

22 MS. HOLMES: I hope so. I'd like to
23 move Exhibits 75 and 76 into evidence at this
24 point.

25 HEARING OFFICER FAY: Any objection?

1 So moved.

2 (Thereupon, Exhibits 75 and 76 were
3 received into evidence.)

4 MS. HOLMES: Just as a -- as a minor
5 procedural point, I believe that Exhibit 48 that
6 we referenced, and CURE has referenced, was
7 identified at the last hearing, but was not
8 entered into evidence. We had objected because we
9 hadn't had sufficient time to review it.
10 Obviously, now we've not only reviewed it but
11 we've referenced it in our own testimony. So we
12 no longer have an objection to Exhibit 48 coming
13 into the record.

14 MS. POOLE: We'd be happy to move that
15 into the record now.

16 HEARING OFFICER FAY: That will be moved
17 into evidence.

18 Exhibit 48 is Environmental Protection
19 Agency Region 9 Preliminary Remediation Goals,
20 PRGs, 1999. And who sponsored that?

21 MS. HOLMES: I believe CURE did.

22 MS. POOLE: Dr. Fox did.

23 HEARING OFFICER FAY: Okay.

24 (Thereupon, Exhibit 48 was
25 received into evidence.)

1 HEARING OFFICER FAY: All right. Mr.
2 Galati.

3 MR. GALATI: Yes, I have a few
4 questions.

5 CROSS EXAMINATION

6 MR. GALATI: Doctor --

7 DR. ODOEMELAM: It's tough, isn't it.

8 MR. GALATI: Dr. Obed.

9 (Laughter.)

10 MR. GALATI: Actually, you know, I'm
11 going to have to make this to Mr. Tyler.

12 Mr. Tyler, I believe you testified
13 earlier today that the -- it was your belief that
14 the cogeneration host should have a duty to
15 warning its own workers. Correct?

16 MR. TYLER: That's correct.

17 MR. GALATI: And wouldn't that be
18 particularly true in this case for any of the
19 potential hazards associated with the indirect
20 impacts of this project?

21 MR. TYLER: That's correct.

22 MR. GALATI: And that would include oil
23 field drilling, as well as operation of those oil
24 wells?

25 MR. TYLER: That's correct.

1 MR. GALATI: Thank you. Mr. Tyler, with
2 respect, I think I heard you say on your summary,
3 or in response to a question of your counsel, that
4 you didn't believe that a soot filter was
5 necessary to reduce any risk to below a
6 significant level. Is that correct?

7 MR. TYLER: That's correct.

8 MR. GALATI: Do you have the same
9 opinion for oxidation catalyst?

10 MR. TYLER: Yes. We -- we would have
11 the same -- the same position. We did not rely on
12 that for a finding of significance. We simply
13 mentioned that because if it was going to be
14 required under the air quality requirements, it
15 would have an effect on reducing potential
16 exposures. But we didn't rely on that for a
17 finding of significance.

18 MR. GALATI: So if the Commission
19 decided no oxidation catalysts would be required
20 under air quality C-2-C2, that wouldn't change
21 your conclusion that the project would not have a
22 significant public health impact?

23 MR. TYLER: That's correct.

24 MR. GALATI: Thank you. No further
25 questions.

1 HEARING OFFICER FAY: Ms. Poole?

2 MS. POOLE: I think Mr. Joseph will
3 begin.

4 HEARING OFFICER FAY: Mr. Joseph. All
5 right.

6 CROSS EXAMINATION

7 MR. JOSEPH: Dr. Odoemelam, I actually
8 appreciated much of your editorial, particularly
9 focusing on the fact that there are large areas of
10 agreement here, and a limited number of areas of
11 disagreement. And that's where we're going to
12 focus, is just on the limited areas of
13 disagreement.

14 You were in the room, I think in fact
15 you were at the table, when Mr. Stein testified
16 that he generally relied on the CAPCOA guidelines
17 for preparing their health risk assessment. Did
18 you hear that testimony?

19 DR. ODOEMELAM: Yes, I did.

20 MR. JOSEPH: And did the staff similarly
21 generally rely on the CAPCOA guidelines for its
22 health risk assessment?

23 DR. ODOEMELAM: Yes, we did. In
24 general.

25 MR. JOSEPH: And you -- you stressed in

1 your statement the importance of relying on
2 regulatory decisions in guiding the Energy
3 Commission's analysis of health risks. Did I
4 catch that right?

5 DR. ODOEMELAM: Yes. We have provided
6 numbers, but we also have to make a contextual
7 presentation of what they mean to the people who
8 have to make decisions.

9 MR. JOSEPH: And in doing your analysis,
10 you are guided by the appropriate other regulatory
11 agencies that have primary jurisdiction over these
12 other areas. Is that right?

13 DR. ODOEMELAM: Yes. As well as our
14 understanding of the limitations of the process,
15 of the assessment process itself.

16 MR. JOSEPH: So are you saying that you
17 -- you think that you do have some freedom to
18 deviate from what a regulatory agency with primary
19 jurisdiction over a topic says about a particular
20 thing?

21 DR. ODOEMELAM: Not -- no, that's not
22 what I'm saying. I think you first have to
23 understand what these assessments are meant for.
24 They are not necessarily meant to provide --

25 MR. JOSEPH: Well, let's stick with my

1 question.

2 DR. ODOEMELAM: Okay.

3 MR. JOSEPH: Do you feel constrained or
4 not by the decisions of other regulatory agencies
5 that have primary jurisdiction over a particular
6 aspect of a health risk assessment?

7 DR. ODOEMELAM: Certain aspects of the
8 decisions, not all.

9 MR. JOSEPH: Okay. So sometimes you do,
10 and sometimes you don't, depending on the subject.

11 DR. ODOEMELAM: Well, no, it's not --
12 it's not quite like that. We all agree on the
13 process for arriving at a number. But in the risk
14 characterization, we all have leeway to understand
15 -- to consider the underlying toxicological issues
16 in making a recommendation to those who will have
17 to decide.

18 MR. JOSEPH: Okay. So let's take your
19 distinction, then. In coming to the number, you
20 believe you are constrained by the decisions of
21 the regulatory agency that has primary
22 jurisdiction over a topic?

23 DR. ODOEMELAM: Yes.

24 MR. JOSEPH: Okay. So no matter how
25 good or how persuasive or how overwhelming the

1 evidence was presented to you that, for example,
2 an emission factor was simply wrong, you would
3 ignore that evidence?

4 DR. ODOEMELAM: It's not that we will
5 ignore it.

6 MR. JOSEPH: You won't use it, will you?

7 DR. ODOEMELAM: Well, not the way --

8 MR. JOSEPH: Do you use evidence if it
9 is strong and persuasive?

10 DR. ODOEMELAM: No. We will consider
11 that evidence in characterizing the risk.

12 MR. JOSEPH: But you won't change your
13 calculation of the number?

14 DR. ODOEMELAM: No.

15 MR. JOSEPH: So if I had absolutely
16 persuasive evidence that you believe that when you
17 came to the number you were off by a factor of a
18 thousand, would that affect your recommendation to
19 the Commission?

20 DR. ODOEMELAM: It depends on what the
21 number is for. If it is for an established
22 emission factor that would rely on ARB to
23 establish for, so that all projects are analyzed
24 the same way. I cannot change because of your
25 single study. That has to be done by ARB, open to

1 comments, and -- and public and -- comments from
2 the public, and the regulatory community.

3 MR. JOSEPH: So you believe that the
4 Energy Commission is absolutely bound by ARB's
5 emission factors?

6 MS. HOLMES: I'm going to object to that
7 question. You mean he, in doing his health risk
8 assessment, not the Energy Commission as an
9 agency. Is that correct?

10 MR. JOSEPH: Well, let's take them both.
11 In doing your health risk assessment, do you, as
12 staff, feel absolutely bound by the ARB's emission
13 factors?

14 DR. ODOEMELAM: Yes, we do.

15 MR. JOSEPH: Let me ask the second
16 question now. Do you believe the Energy
17 Commission itself is absolutely bound in making
18 its decisions on a project by the ARB's emission
19 factors?

20 MS. HOLMES: I'm going to object on the
21 grounds that it calls for a legal conclusion from
22 the witness. I think he's testified as to how he
23 does his job, I think that's sufficient.

24 MR. JOSEPH: So you're not making any
25 recommendation to the Commission --

1 MS. HOLMES: Is there a ruling on the --

2 COMMISSIONER MOORE: Well, actually --
3 actually, you're right. Except that it's not just
4 a legal, but it's also a political decision
5 because, in fact, we're taking all of your advice,
6 and we have on various occasions overridden that,
7 taking it into account the best that we can.

8 So it's -- I'll just qualify that a
9 little bit farther. So Ms. Holmes is right.

10 MS. HOLMES: Thank you.

11 MR. JOSEPH: Thank you. And
12 Commissioner Moore, with that clarification, I can
13 move on.

14 COMMISSIONER MOORE: Okay.

15 HEARING OFFICER FAY: Well, keep in mind
16 that there's two problems. Analysis one is the
17 LORS analysis. And the other is under CEQA.

18 MR. JOSEPH: And Mr. Fay, I appreciate
19 very much your comments. That's exactly where I
20 was going.

21 Okay, let's move on to a different
22 subject.

23 Would you turn to page 9 of your public
24 health testimony, please? I'm sorry, it's page 8.
25 Let's try again. It's page 7.

1 (Laughter.)

2 MR. JOSEPH: This happens every time I
3 try to take the numbers without looking.

4 At the bottom of the page, you noted
5 that OEHHA changed the REL for acrolein exposure
6 after the AFC was filed.

7 DR. ODOEMELAM: Yes, I did.

8 MR. JOSEPH: Do you agree that the new
9 REL published by OEHHA is the appropriate REL to
10 use?

11 DR. ODOEMELAM: Yes, it is.

12 MR. JOSEPH: Would you also agree that
13 Cal-EPA's Office of Environmental Health Hazard
14 Assessment is the state agency that sets RELs in
15 California?

16 DR. ODOEMELAM: Yes, I do.

17 MR. JOSEPH: And I take it you feel
18 bound by their determinations of RELs; is that
19 right?

20 DR. ODOEMELAM: Yes.

21 MR. JOSEPH: Okay. Now, if you would
22 turn to page 12, please. And I'm sure of that.
23 In the second paragraph there, you report that
24 when the new Cal-EPA REL for acrolein is used, the
25 incremental health hazard index changes to 0.54.

1 DR. ODOEMELAM: Yes.

2 MR. JOSEPH: Have you seen the March
3 1999 publication by OEHHA where they change the
4 REL for acrolein?

5 DR. ODOEMELAM: I've read excerpts of
6 it.

7 MR. JOSEPH: Let's make it easy. I
8 won't test your recollection. I will actually
9 hand to you page C-2 from this document, which is
10 Exhibit 3 to Dr. Fox's public health testimony.

11 Can you tell us what's on that page, in
12 general?

13 DR. ODOEMELAM: What, everything on the
14 page?

15 MR. JOSEPH: No, I'm sorry.

16 (Laughter.)

17 MR. JOSEPH: That's the REL for
18 acrolein; is that correct?

19 DR. ODOEMELAM: Yes, it is.

20 MR. JOSEPH: What is the --

21 MS. HOLMES; I'm sorry, I don't have the
22 page. C -- C-2?

23 MR. JOSEPH: Yes.

24 MS. HOLMES: Thank you.

25 MR. JOSEPH: What are the target organs

1 listed there for acrolein?

2 DR. ODOEMELAM: There are several of
3 them. And you cannot combine them.

4 MR. JOSEPH: I asked you what are the
5 target organs listed for acrolein?

6 DR. ODOEMELAM: We have eyes and
7 respiratory irritation.

8 MR. JOSEPH: Thank you.

9 DR. ODOEMELAM: Respiratory system.

10 MR. JOSEPH: Thank you.

11 DR. ODOEMELAM: But you have to consider
12 them separately --

13 MR. JOSEPH: Excuse me. I'll ask the
14 questions. Your counsel will have an opportunity
15 to ask you questions on redirect. It'll go a lot
16 smoother if we stick to my questions.

17 Now, I'm going to hand you the entire
18 March '99 document from Cal-EPA's OEHHA. Can you
19 tell me where in that document it says that the
20 RELs do not apply to worker exposure?

21 DR. ODOEMELAM: For -- for RELs in
22 general, or just acrolein?

23 MR. JOSEPH: Yes. For RELs in general.
24 Can you find me any place in that document that
25 says they don't apply to workers?

1 DR. ODOEMELAM: Well, it wouldn't be
2 written here that they don't apply to workers. We
3 use the worker exposure for contextual
4 presentation of what the numbers mean.

5 MR. JOSEPH: So there's nothing in that
6 document that says that RELs don't apply to
7 workers?

8 DR. ODOEMELAM: No.

9 MR. JOSEPH: Okay. I'd like to point
10 you to page 13 in that document and ask you to
11 read that one sentence whose beginning is
12 highlighted, please.

13 DR. ODOEMELAM: RELs are intended to
14 protect individuals who live or work in the
15 vicinity of emissions of these substances.

16 MR. JOSEPH: Thank you.

17 Mr. Fay, I'd like to mark a couple of
18 exhibits now so that we can be clear on the
19 record.

20 First, I'd like to mark -- we can mark
21 this as either one or two exhibits, at your
22 preference. The testimony of Phyllis Fox, dated
23 January 3rd, on public health impacts. And this
24 -- in addition, the January 6th supplemental
25 testimony of Phyllis Fox.

1 HEARING OFFICER FAY: All right. The
2 January 3rd testimony will be Exhibit 77.

3 MS. HOLMES: I'm sorry, I'm behind you
4 guys. Which one's which?

5 HEARING OFFICER FAY: The main testimony
6 filed by Phyllis Fox on January 3rd --

7 MS. HOLMES: On Public Health?

8 HEARING OFFICER FAY: On Public Health.

9 MS. HOLMES: Okay.

10 HEARING OFFICER FAY: Exhibit 77.

11 (Thereupon, Exhibit 77 was marked
12 for identification.)

13 HEARING OFFICER FAY: And the supplement
14 was filed when?

15 MR. JOSEPH: January 6.

16 HEARING OFFICER FAY: Dr. Fox's
17 supplement filed January 6 will be Exhibit 78.
18 Marked for identification.

19 (Thereupon, Exhibit 78 was marked
20 for identification.)

21 MR. JOSEPH: Thank you.

22 Dr. Odoemelam --

23 DR. ODOEMELAM: Let me get my copy.

24 MR. JOSEPH: Please.

25 MS. HOLMES: We're going to be

1 objecting, just for your information, to the
2 introduction of the supplemental testimony.

3 HEARING OFFICER FAY: Oh, I don't think
4 he's introducing it.

5 MS. HOLMES: Right. We just --

6 MR. GALATI: We'll be joining.

7 COMMISSIONER MOORE: Marc, where are you
8 in your questioning? I'm trying to figure out
9 when we might want to take a break. I'm looking
10 at a sea of sleeping faces, and --

11 MR. JOSEPH: We might be a half to two-
12 thirds of the way through. So this could be a
13 fine time for a break.

14 COMMISSIONER MOORE: Why don't we do
15 that. Why don't we just call a ten minute break
16 and let everybody stretch their legs a little bit,
17 and then kind of get them back onto your line of
18 questioning and stuff.

19 MR. JOSEPH: Thank you, Commissioner
20 Moore.

21 (Thereupon, a break was taken.)

22 HEARING OFFICER FAY: We're continuing
23 with Mr. Joseph's cross examination of staff
24 witnesses.

25 MR. JOSEPH: Thank you.

1 Do you have in front of you Exhibit 78?

2 DR. ODOEMELAM: Yes, I do.

3 MR. JOSEPH: Would you look at the
4 attachment to that exhibit?

5 DR. ODOEMELAM: Okay.

6 MR. JOSEPH: This an e-mail from Melanie
7 Marty, the Chief of the Air Toxicology and
8 Epidemiology Section of OEHHA. Have you seen this
9 e-mail before?

10 DR. ODOEMELAM: Yes, I have.

11 MR. GALATI: Again, I'd object to this

12 --

13 MS. HOLMES: We're going to object to --

14 MR. GALATI: -- being referred to.

15 MS. HOLMES: -- this being referred to.

16 The grounds of the objection are that the -- the
17 question that's at issue in this case is not
18 whether workers are appropriately treated in the
19 public health analysis; it's which workers. As
20 you've heard staff testify, they believe that
21 drawing an artificial distinction at a property
22 line is inappropriate, and that workers that are
23 engaged in the same industrial processes should be
24 treated as workers for purposes of an analysis,
25 and that workers that are in unrelated industries,

1 such as the warehouse that Mr. Tyler referred to
2 next to a cogeneration facility somewhere in
3 Sacramento, would be appropriately treated as
4 members of the public.

5 Thus, this memo, which just refers to
6 workers generically, does not go -- is not
7 relevant to the question of whether or not all
8 workers or whether some workers are appropriately
9 treated under the public health portion of the
10 analysis, or the worker safety portion.

11 MR. GALATI: And I would add to that, to
12 the objection, that this is an e-mail from --
13 purporting to be from some -- from a doctor in
14 response to a question to Dr. Fox. And CURE had
15 the ability to bring that witness here and subject
16 that witness to cross examination, if that is that
17 witness's opinion.

18 MS. HOLMES: This is a subject that was
19 raised, this issue of worker standards versus
20 public health standards applying to workers has
21 been raised as -- I believe for more than a month
22 now, in this proceeding. There is no reason for
23 it to come in late.

24 MR. JOSEPH: Mr. Fay --

25 HEARING OFFICER FAY: Your response?

1 MR. JOSEPH: The question to which
2 they're objecting was have you seen this e-mail.

3 MR. GALATI: I'm objecting at this point
4 to preserve the record so that there's no
5 reference to it.

6 HEARING OFFICER FAY: I understand.

7 MR. JOSEPH: First of all --

8 HEARING OFFICER FAY: And where is this
9 going?

10 MR. JOSEPH: First of all, the question
11 was have you seen this e-mail. Second, we asked
12 Dr. Marty to appear, or for someone from her staff
13 to appear. This is a fellow sister agency that we
14 have been hoping to bring here, that we have no
15 power to compel to come here. They said they were
16 too busy, but they'd be happy to write it down and
17 send it to us.

18 This is the best we can do. We don't
19 have the power that the staff has to get somebody
20 else in here. We have to have the ability to
21 produce evidence. Now, Ms. Holmes gave a very
22 good summary of what the issue is that's in
23 contest, and she gave a very good explanation of
24 what their perspective is on the issue.

25 We're entitled to present our

1 perspective on the issue, and that's what we're
2 doing here.

3 MS. HOLMES: I really have to object to
4 the characterization of staff as not using its
5 resources to get Dr. Marty here. This is the
6 first time we've heard anybody was interested in
7 having Dr. Marty testify at this proceeding. We
8 would've been happy to try to --

9 HEARING OFFICER FAY: That --

10 MS. HOLMES: -- see if we could use our
11 resources to secure her presence.

12 HEARING OFFICER FAY: Certainly. I
13 appreciate that. I -- I know your objections, but
14 the point that I take is that the committee and
15 the Commission may have to draw this line between
16 workers that meet different standards, and not the
17 staff. And so I'm going to allow Mr. Joseph's
18 question.

19 MR. JOSEPH: Thank you.

20 Can you read the first two sentences of
21 that e-mail?

22 DR. ODOEMELAM: In the air toxics heart
23 smarts program, we utilize accurate and chronic
24 RELs as well as all kinds of potency factors to
25 evaluate impacts of site for both workers and

1 residents. We do not recommend using occupational
2 standards in risk assessment.

3 MR. JOSEPH: Thank you. Now, previously
4 you testified that in coming up with the number
5 that you, as staff, felt constrained by the
6 determinations of other agencies as to the
7 appropriate inputs to that calculation. Is that a
8 fair summary?

9 DR. ODOEMELAM: Yes.

10 MR. JOSEPH: Would you agree that OEHHA
11 and its chief of the Air Toxicology and
12 Epidemiology section are in the best position to
13 determine to whom OEHHA's RELs apply?

14 DR. ODOEMELAM: No.

15 MR. JOSEPH: Do you think that you're in
16 a better position than OEHHA to determine who
17 OEHHA's RELs apply to?

18 DR. ODOEMELAM: It's not being in a
19 better position, but we are in a position for a
20 contextual presentation of these numbers to the
21 Commissioners we advise. And also, OSHA has
22 primary regulatory authority over exposures in the
23 work -- at the workplace, not OEHHA.

24 MR. JOSEPH: Should the Commission, as
25 opposed to the staff, ignore the opinion of OEHHA

1 and its chief of the appropriate department in its
2 decision?

3 DR. ODOEMELAM: As you can see in this
4 letter, it is a recommendation, as is the case
5 with your whole risk assessment document. These
6 are recommendations. And the end users of the
7 risk assessment numbers have the obligation to
8 assess the uncertainty in the process and so
9 advise the decision makers.

10 MR. JOSEPH: Do you remember what my
11 question was?

12 DR. ODOEMELAM: Repeat it.

13 MR. JOSEPH: Should the Commission
14 ignore the opinion of OEHHA and its chief of the
15 appropriate department in making its decision?

16 DR. ODOEMELAM: Well, the Commission
17 should not ignore it.

18 MR. JOSEPH: Thank you.

19 MR. GALATI: And again, I'd just like to
20 renew my objection. Without being able to explore
21 this witness's full opinion, we have a one
22 paragraph sentence or so about that is being said
23 what OEHHA's chief's opinion is on a matter that I
24 have no ability to cross examine. Understand that
25 you sustained.

1 MR. JOSEPH: Mr. Fay, we would be
2 delighted if the Commission, through its
3 resources, could have Dr. Marty testify.
4 Absolutely delighted.

5 HEARING OFFICER FAY: Let's continue.

6 MR. JOSEPH: Thanks.

7 I believe you're familiar with the
8 CAPCOA risk assessment guidelines; is that right?

9 DR. ODOEMELAM: Yes. We helped prepare
10 the first draft.

11 MR. JOSEPH: Great. Do you have a copy
12 handy?

13 MS. HOLMES: Of the first draft?

14 MR. JOSEPH: I'm sorry. Do you have a
15 copy of the currently effective guidelines handy?

16 MS. HOLMES: Are those included as one
17 of the --

18 MR. JOSEPH: Those are Exhibit 2 to Dr.
19 Fox's testimony, which has been marked as Exhibit
20 77. Sorry, Attachment 2.

21 DR. ODOEMELAM: Yes, I have it.

22 MR. JOSEPH: Can you show me any place
23 in this document where it says that the results of
24 a risk assessment do not apply to offsite workers?

25 DR. ODOEMELAM: Well, on -- on page 3-

1 32, the second paragraph from the top. I would
2 note, in the second sentence that starts with, for
3 offsite workers it may be appropriate to adjust
4 the exposure period to account for lifetime
5 exposure of eight hours per day, 24 days per year,
6 for 46 years.

7 MR. JOSEPH: Okay. Do you remember what
8 my question was?

9 DR. ODOEMELAM: Yeah. To -- you wanted
10 to know if there was any place in this document
11 that says that worker exposures do -- that the
12 RELS do not apply to workers.

13 MR. JOSEPH: No. Actually, I didn't ask
14 about RELs. I asked whether there's any place in
15 this document which says that a risk assessment
16 performed under the CAPCOA guidelines does not
17 apply to offsite workers.

18 DR. ODOEMELAM: No, not -- there is not
19 specifically stated in the document.

20 MR. JOSEPH: In fact, the very sentence
21 you pointed to tells you how to do the calculation
22 for offsite workers, doesn't it?

23 DR. ODOEMELAM: Yeah, but that is if you
24 -- it's all site specific.

25 MR. JOSEPH: For example, the site of a

1 power plant.

2 DR. ODOEMELAM: Yes, and also a power
3 plant --

4 MR. JOSEPH: Yes.

5 DR. ODOEMELAM: -- in which you have
6 workers --

7 MR. JOSEPH: Yes, for how to do the
8 calculation for offsite workers. Right?

9 DR. ODOEMELAM: But --

10 HEARING OFFICER FAY: Mr. Joseph, let
11 the witness answer.

12 MS. HOLMES: Would you stop arguing,
13 please.

14 MR. JOSEPH: Yeah. Yeah.

15 MS. HOLMES: Thank you.

16 MR. JOSEPH: Thank you.

17 DR. ODOEMELAM: You're welcome.

18 MR. JOSEPH: In your summary of your
19 testimony, or perhaps it was in the rebuttal to
20 the CURE testimony today, you said that if the
21 CURE analysis for acrolein were adopted, the
22 Commission couldn't site any power plants. Did I
23 characterize that fairly?

24 MS. HOLMES: I believe that statement
25 came from Mr. Tyler.

1 MR. TYLER: Actually, I'm not sure about
2 that.

3 (Laughter.)

4 MR. TYLER: What I -- what I said is if
5 you took your interpretation of who is a worker
6 and who is the public, we couldn't site any.

7 MR. JOSEPH: Okay. My question was
8 about the acrolein factor, which I think Dr.
9 Odoemelam testified about. Do you recall that?

10 DR. ODOEMELAM: Yes. I -- what I meant
11 is -- is not so much that we can't site anything,
12 but it just complicates the issue.

13 MR. JOSEPH: Okay. Power plants could
14 be sited, though; right?

15 DR. ODOEMELAM: They could be sited.

16 MR. JOSEPH: And in fact, the impacts of
17 acrolein emissions -- in fact, acrolein emissions
18 can be reduced at the source. Is that right?

19 DR. ODOEMELAM: Essentially. But again,
20 the siting, if we are to go by what you said, one
21 project would be sited differently depending on
22 whether or not CURE is involved in it.

23 MR. JOSEPH: Well, let's go down the
24 list, then. First of all, tell me, how do you
25 mitigate the impacts of -- how do you eliminate --

1 reduce the impacts of acrolein emissions?

2 DR. ODOEMELAM: By improved combustion.

3 MR. JOSEPH: Anything else?

4 DR. ODOEMELAM: Not -- not anything that
5 I can just think about.

6 MR. JOSEPH: How about an oxidation
7 catalyst?

8 DR. ODOEMELAM: Oh, that is obvious.

9 MR. JOSEPH: Okay. So it's obvious that
10 an oxidation catalyst reduces acrolein emissions;
11 right?

12 DR. ODOEMELAM: Yes.

13 MR. JOSEPH: Okay. Did the High Desert
14 Power Plant have an oxidation catalyst proposed?

15 DR. ODOEMELAM: Was --

16 MS. HOLMES: If he knows.

17 MR. JOSEPH: Yeah, if you know. Well,
18 he said it depends on whether CURE is involved or
19 not, so I want to see the basis for that
20 statement.

21 DR. ODOEMELAM: Well, I mean CURE being
22 involved in terms of multiplying acrolein emission
23 factors by 10. This is not done in any other
24 project.

25 MR. JOSEPH: Okay. Let's -- in

1 deference to Mr. Fay's request, let's shorten this
2 up.

3 Did the High Desert Power Plant, the La
4 Paloma Power Plant, Elk Hills Power Plant, Three
5 Mountain Power Plant, and Pittsburg District
6 Energy Facility all currently plan to or have
7 approved oxidation catalysts?

8 DR. ODOEMELAM: On what?

9 MR. JOSEPH: On the turbine emissions.

10 DR. ODOEMELAM: I don't know. You
11 should ask our air quality staff.

12 MR. JOSEPH: Okay. I think the time may
13 come when we ask the Commission in this proceeding
14 to take official notice of the project description
15 in Commission decisions in other proceedings to
16 demonstrate that oxidation catalysts are being
17 widely used on other projects.

18 HEARING OFFICER FAY: If it's part of
19 the administrative record, the committee can take
20 notice of it.

21 MR. JOSEPH: Thank you. That's all I
22 need.

23 HEARING OFFICER FAY: Okay. Thank you.

24 Ms. Holmes, if it's all right with you
25 we will allow the Applicant to put on their

1 witness from Toronto before we go back for your
2 redirect?

3 MS. HOLMES: That's fine.

4 HEARING OFFICER FAY: Okay. We do that
5 to be sure we get that testimony in.

6 Mr. Galati, could you characterize this
7 -- could you characterize this rebuttal testimony,
8 and just put it in context for us.

9 MR. GALATI: Yes. This is rebuttal
10 testimony in specific rebuttal to the witnesses
11 brought by CURE from Engelhard, regarding the
12 efficacy of soot filter. And this is -- and also
13 the testimony given by Phyllis Fox regarding I
14 think a particular fax that was attached to
15 staff's testimony which was part of the basis for
16 Joe Loyer's testimony on changing --

17 MS. POOLE: I would just like to
18 clarify. The witness is brought by CURE. We're
19 from Cinco Group.

20 MR. GALATI: Yeah, Cinco --

21 MS. POOLE: Correct.

22 MR. GALATI: -- a distributor of
23 Engelhard, I believe.

24 This witness is from Catalytic Exhaust,
25 and sir, will you please state your name, address,

1 and place of employment?

2 Oh, I'm sorry. He has to be sworn.

3 HEARING OFFICER FAY: Let's swear the
4 witness, please.

5 (Thereupon, John Stekar was, by the
6 court reporter, sworn to tell the truth
7 and nothing but the truth.)

8 TESTIMONY OF

9 JOHN STEKAR

10 called as a witness on behalf of the Applicant,
11 having first been duly sworn, was examined and
12 testified as follows:

13 THE WITNESS: Yeah, my name is John
14 Stekar. I'm the CEO of Catalytic Exhaust
15 Products, and we're located in Brampton, Ontario,
16 Canada.

17 DIRECT EXAMINATION

18 BY MR. GALATI:

19 Q And have you reviewed any documents in
20 preparation for testifying today?

21 A Yes, I did. Yes, several.

22 Q Did you review the Final Staff
23 Assessment, which was staff's testimony on Air
24 Quality?

25 A I perused that, yes.

1 Q And did you review an attachment to
2 staff's updated testimony? I'll put a copy of it
3 in front of you, the revised testimony.

4 A Yes, I have.

5 Q And that's a fax message from your
6 company?

7 A That is correct.

8 Q And that's attention Keith Golden?

9 A That is correct.

10 MR. GALATI: I believe this was
11 previously marked and moved in as an exhibit, as
12 an attachment to staff's testimony. But if it is
13 not, I'll so mark it.

14 HEARING OFFICER FAY: I believe that it
15 is -- since it's attached to staff's testimony, I
16 think it is marked for exhibit.

17 This is -- let's just make clear this is
18 identified. This was attached to a supplement
19 filed by the air quality staff. And Ms. Holmes,
20 can you help us with the date on that?

21 MS. HOLMES: Unfortunately, I can't.

22 HEARING OFFICER FAY: All right. It's
23 -- it's an attachment to the back, it's the last
24 page of Exhibit 55.

25 MS. HOLMES: Thank you.

1 MR. GALATI: Thank you.

2 BY MR. GALATI:

3 Q And did you also review the testimony of
4 Phyllis Fox on behalf of CURE in air quality?

5 A Yes, I did.

6 Q Okay. Do you have any comments on the
7 testimony?

8 A Well, my -- my primary comment is it
9 just is a generalization of soot filters. They
10 are only applicable to a certain percentage of
11 machinery operating in pretty much any
12 environment, be it construction or mining, where
13 we -- we've produced many thousands of products
14 for those particular fields. So in general, all I
15 have to say is these filters are very application
16 specific. They do not work for, you know, any and
17 all vehicles. They only work for a few, as a
18 rule.

19 Q Okay. Well, with respect to the fax
20 which was the last page attachment to Exhibit 55,
21 there is some discussion in there about kilns.

22 A Yes.

23 Q Could you please explain that?

24 A A soot filter is a very efficient
25 collector of diesel particulate matter.

1 Unfortunately, diesel particulate matter requires
2 a minimum temperature to begin to oxidize, and
3 oxidation is the process of carbon becoming a gas,
4 CO, or CO2.

5 Now, the -- if you take a given fleet of
6 vehicles and you equip them all with soot filters,
7 they're not all going to function properly. They
8 will -- all of the filters will collect soot up to
9 very high efficiency rates in the order of 85 to
10 92 percent. However, these filters will not
11 necessarily -- how would I put it. They will
12 eventually plug with soot. Some will not plug
13 with soot, because they have a very high duty
14 cycle with very hot exhaust temperatures. So
15 those vehicles will have what we call passive
16 regeneration. In other words, the operator won't
17 really know the filter is there, because he won't
18 have any operational difficulties.

19 Other equipment, though, will eventually
20 stall, due to the fact that the soot filters have
21 plugged. They have filled with carbon.

22 A kiln produces the temperature you
23 require to make carbon, solid carbon in gaseous
24 form. So in -- in our fax here, we -- basically
25 we made an assumption that not all of the

1 construction vehicles would be able to regenerate
2 their filter successfully. So kilns, much the
3 same as pottery kilns, would be required to
4 regenerate these filters, to clean them of the
5 accumulated carbon. And this is an operational
6 must with a lot of fleets.

7 Q And, sir, your job with Catalytic
8 Exhaust is -- could you please briefly describe
9 what your job is?

10 A Oh, I -- yeah. I'm the -- well, I'm the
11 CEO, but I have about a 19 year history with the
12 application of soot filters.

13 Q Okay. And this use of this kiln, is
14 this an old technology, or would you say it's a
15 new technology?

16 A No, it's an old, reliable technology.

17 Q And do the new soot filters require the
18 use of this kiln?

19 A Depending on the application, they may.

20 Q And that's a function of how often
21 during the duty cycle you can reach a certain
22 temperature; is that correct?

23 A That's correct. Reaching the
24 temperature and the duration of that temperature.
25 Plus many other variables.

1 Q Okay. What -- do you have any
2 indication of what the cost of soot filter would
3 be for this project?

4 A Okay. I think it's in the order of
5 180,000 plus, I believe.

6 Q And is that just the cost to put the
7 soot filters on?

8 A That's the -- that's the capital cost.

9 Q Did you calculate any cost of any loss
10 of efficiency of equipment?

11 A There would be a fuel consumption
12 increase somewhere in the order of two to four
13 percent, performance loss of one to three percent.
14 There would be operational losses on filter
15 failures, and there would be increased maintenance
16 due to filter plugging.

17 Q Any idea of what those other costs would
18 be?

19 A That's -- it's a loaded question. You
20 could easily -- if you look at the capital cost of
21 180K, you could easily -- I mean, in the worst
22 case, you could double it. Maybe it could be
23 higher. It's pretty much site and equipment
24 specific.

25 MR. GALATI: I have no further

1 questions. This witness is tendered for cross
2 examination.

3 HEARING OFFICER FAY: Ms. Holmes?

4 MS. HOLMES: I have no questions.

5 MS. POOLE: One minute, please.

6 HEARING OFFICER FAY: Let's go off the
7 record for a moment.

8 (Off the record.)

9 HEARING OFFICER FAY: All right. CURE,
10 do you have any cross examination of the
11 Applicant's witness?

12 MS. POOLE: Yes.

13 CROSS EXAMINATION

14 BY MS. POOLE:

15 Q Mr. Stekar, is that correct?

16 A That's correct. Yes.

17 Q Your testimony is based on your filters;
18 correct?

19 A I have to clarify one thing. We are --
20 we purchase catalysts and catalyst products from
21 Engelhard Corporation. We also compete against
22 Engelhard Corporation, depending on the division.

23 So I'm afraid they're -- catalysts in
24 most cases, we purchase catalysts from other
25 people, as well.

1 Q I'm just referring to soot filters here.

2 A Soot filters, okay, sure. Sure.

3 Q Who manufactures your soot filters?

4 A The soot grates come from Corning Glass
5 Works, or 3M Corporation.

6 Q They do not come from Engelhard. Is
7 that correct?

8 A We -- no. Okay, yeah, no. We -- we
9 haven't -- I haven't sold any Engelhard specific
10 catalyst coatings.

11 Q And so your testimony is with respect to
12 the soot filters manufactured by Corning Glass and
13 3M?

14 A But Engelhard Corporation filters are
15 the same. Or the -- well, their -- their supports
16 are of the manufacturers.

17 Q Now, I think we may have a terminology
18 difference here.

19 A Yeah. There are components --

20 Q A soot filter is -- is several
21 components; correct?

22 A That's correct. Yes.

23 Q Could you briefly describe those
24 components?

25 A A soot filter consists of a canning, an

1 interim mat, a quarterite support, and a catalyst
2 coating.

3 Q And --

4 A Usually. But they all vary. There's
5 many variations.

6 Q And which portion of this do you use
7 from Engelhard?

8 A Oh, you mean with respect to -- oh, we
9 buy Engelhard catalysts. We purchase Engelhard
10 catalysts. But --

11 Q And who assembles the various pieces of
12 the soot filter?

13 A We assemble it in-house.

14 Q So it's your soot filter; correct?

15 A We have our name on it. Yes, that's
16 correct.

17 Q Are your soot filters catalyzed?

18 A Yes, in some cases.

19 Q Do you have any installed in California?

20 A Not that I know of, no. No.

21 Q Is your soot filter certified by the
22 California Air Resources Board for use in
23 California?

24 A Not our soot filters, no. Our catalysts
25 are.

1 Q How long has your soot filter been on
2 the market?

3 A Roughly ten years.

4 MS. POOLE: Thank you.

5 THE WITNESS: Thank you.

6 REDIRECT EXAMINATION

7 BY MR. GALATI:

8 Q When you mentioned in your direct
9 testimony regarding soot filters and their ability
10 to plug up --

11 A Yes.

12 Q -- were you speaking soot filters
13 generally, or were you talking about your soot
14 filter?

15 MS. POOLE: Excuse me. Isn't this
16 supposed to be recross? I didn't ask any
17 questions about this on cross.

18 MR. GALATI: Actually, you asked
19 questions about whether he was speaking about his
20 soot filter, or Engelhard's.

21 HEARING OFFICER FAY: Go ahead, Mr.
22 Galati.

23 MR. GALATI: Thank you.

24 BY MR. GALATI:

25 Q My question, again, is, with respect to

1 your statement that soot filters plug up, were you
2 talking about soot filters in general, or were you
3 talking about your particular soot filter?

4 A That is soot filters in general.

5 MR. GALATI: Thank you. No further
6 questions.

7 HEARING OFFICER FAY: Recross on that
8 question?

9 RECROSS EXAMINATION

10 BY MS. POOLE:

11 Q Is it true that when they plug up, if
12 you have a mechanism built in to the filter to
13 burn that off, it isn't a problem?

14 A A soot filter can absorb an excessive
15 amount of soot. When that soot incinerates, you
16 have a very high exotherm. If it's a quarterite
17 filter it will crack in the middle. Failure is
18 instantaneous. So --

19 Q Could you answer my question, please?

20 A I think that's what you --

21 Q I didn't --

22 A Go ahead.

23 Q -- understand your answer.

24 A Okay. Yeah.

25 Q If --

1 A I'm sorry, I'm getting technical. I'll
2 cut back.

3 Q Your statement regarding soot filters
4 plugging up --

5 A Sure, right.

6 Q -- if you have a mechanism within the
7 soot filter to burn off the soot, is that a
8 problem?

9 A Well, no. Any regeneration -- any
10 regeneration system is not a problem. No.

11 Q So soot filters with regeneration
12 systems do not plug up?

13 A History says otherwise. They all plug,
14 regeneration system or not. These systems are
15 very complex, they're very unreliable. I have
16 lots of documentation to prove that.

17 Q Is a system with a regeneration system
18 less likely to plug than one without one?

19 A The -- in all honesty, the best
20 regeneration system is no regeneration system at
21 all. It should be a passive system.

22 Q That didn't answer my question.

23 A Okay. One more time, then. I'll try
24 again.

25 Q Is a soot filter with a regeneration

1 system less likely to plug up than one without a
2 regeneration system?

3 A Okay, no. There, you're correct. Yes.
4 Yes.

5 MS. POOLE: Thank you.

6 THE WITNESS: You're welcome.

7 HEARING OFFICER FAY: All right.

8 MR. GALATI: No further questions.

9 HEARING OFFICER FAY: Thank you very
10 much, Mr. Stekar.

11 MR. GALATI: The volley is over.

12 MR. STEKAR: Thank you.

13 HEARING OFFICER FAY: Have a safe trip
14 back.

15 MR. STEKAR: Oh, thank you.

16 HEARING OFFICER FAY: And now --

17 MS. HOLMES: Redirect?

18 HEARING OFFICER FAY: -- back to Ms.
19 Holmes.

20 TESTIMONY OF

21 OBED ODOEMELAM AND RICK TYLER

22 called as witnesses on behalf of the Commission
23 staff, having previously been duly sworn, were
24 examined and testified as follows:

25 ///

1 REDIRECT EXAMINATION

2 MS. HOLMES: Thank you. I have just a
3 couple of questions on -- I'm sorry.

4 These questions are for either witness.
5 Earlier this afternoon there was discussion about
6 agencies with primary authority. Who do you
7 believe has primary authority over worker exposure
8 in California?

9 MR. TYLER: Cal-OSHA.

10 MS. HOLMES: And does OEHHA have any
11 authority over the workplace environment?

12 MR. TYLER: Not to the best of my
13 knowledge.

14 MS. HOLMES: We also had some discussion
15 about I believe it's Attachment 3 to Exhibit 77,
16 which is the determination of acute reference
17 exposure levels. We looked at page C2 during your
18 cross examination by CURE. There was a discussion
19 about the hazard index targets. Do you recollect
20 that discussion?

21 MR. TYLER: Yes.

22 MS. HOLMES: What is the reference
23 exposure level based on, on page C2?

24 MR. TYLER: I believe it's based on mild
25 eye irritation. The REL is based on mild eye

1 irritation.

2 MS. HOLMES: So is it your belief that
3 it would be appropriate to use -- inappropriate to
4 use this REL for respiratory system effects?

5 MR. JOSEPH: Okay, excuse me. You said
6 both appropriate and inappropriate. Just so the
7 record is clear, would you mind stating --

8 MS. HOLMES: Inappropriate --

9 MR. JOSEPH: -- it again?

10 MS. HOLMES: -- inappropriate to use
11 this reference exposure level for respiratory
12 system effects.

13 MR. JOSEPH: Thank you.

14 MR. TYLER: I want to qualify that just
15 a little bit before I answer it. I believe that
16 they've chosen to use mild eye irritation as
17 that's the most sensitive end point. That means
18 that it would protect from virtually all other end
19 points. However, if you're going to do a hazard
20 index calculation, you need to find a reference
21 value that's specific to respiratory irritation,
22 which may or may not be in the same ballpark.

23 MS. HOLMES: Thank you. And do you know
24 what the uncertainty factor is for the REL that
25 we're talking about?

1 MR. TYLER: Based on the document that
2 they -- they provided on page C4 for acrolein, the
3 uncertainty factor is 60. Much as I was
4 discussing earlier, these factors can be
5 relatively large.

6 COMMISSIONER ROHY: Excuse me. Could
7 you tell me, 60 what is --

8 MR. TYLER: Sixty -- in other words, you
9 take -- you have found mild eye irritation in some
10 experimental data. You've determined that -- that
11 -- and I believe here it's healthy human
12 volunteers. So you have a relatively high quality
13 --

14 COMMISSIONER ROHY: Just tell me, I want
15 to understand just what's the reference point and
16 what is 60. Is it 60 percent, 60 people --

17 MR. TYLER: Sixty, you divide the number
18 that you get -- 60 divided, you divide it by 60.

19 COMMISSIONER ROHY: Oh. Thank you.
20 We've had several numbers today thrown around. I
21 just want to make sure I understand them.

22 MR. TYLER: So you take the level where
23 effect occurs and you divide it by 60, just to be
24 safe.

25 COMMISSIONER ROHY: Thank you.

1 MS. HOLMES: Thank you.

2 Dr. Odoemelam, there was some discussion
3 earlier today about Exhibit -- or Attachment 2 to
4 Exhibit 77, which is the Air Toxics Hot Spots
5 Program revised risk assessment guidelines. Can
6 you please tell me what the populations of concern
7 that are cited in that document are?

8 DR. ODOEMELAM: All populations,
9 especially the susceptible and very sensitive
10 within the population.

11 MR. JOSEPH: Can you give me a page
12 reference?

13 DR. ODOEMELAM: Page 13.

14 MR. JOSEPH: Page 13? Are we looking at
15 the same document here?

16 HEARING OFFICER FAY: Ms. Holmes, could
17 you identify the document?

18 MS. HOLMES: I take it back. I believe
19 I'm looking at something that's on -- that still
20 is part of Attachment 3.

21 HEARING OFFICER FAY: This is Attachment
22 3 of --

23 MS. HOLMES: I'm sorry. Yes, it was not
24 -- Attachment 3. Page 13, 1.5 populations of
25 concern.

1 HEARING OFFICER FAY: Attachment 3 of
2 Exhibit 77?

3 MS. HOLMES: Yes.

4 Does that complete your response?

5 DR. ODOEMELAM: Yes.

6 MS. HOLMES: And can you also, from the
7 same document, can you tell us what the purpose of
8 the RELs is?

9 DR. ODOEMELAM: It is to protect all
10 individuals.

11 MS. HOLMES: And can you tell us what
12 the definition is of the RELs?

13 DR. ODOEMELAM: It is the exposure level
14 established to ensure that exposures do not cause
15 any adverse health impacts among everyone in the
16 population.

17 MS. HOLMES: And finally, can you tell
18 us what this document states should be done is the
19 hazard index was greater than one?

20 DR. ODOEMELAM: It says --

21 MR. JOSEPH: Can I get a page reference
22 again, if you're going to read?

23 DR. ODOEMELAM: Page -- page 8.

24 MR. JOSEPH: Thank you.

25 DR. ODOEMELAM: If the ratio exists one,

1 then the risk manager needs to consider whether
2 risk reduction is appropriate.

3 MS. HOLMES: Does it mean that there is
4 necessarily an adverse health impact?

5 DR. ODOEMELAM: No, it does not.

6 MS. HOLMES: Thank you. Looking at all
7 three of the documents, and by that I mean
8 Attachment 2 and Attachment 3 to Exhibit 77, and
9 Exhibit 78, which was the statement by Dr. Marty,
10 is there anything in any of those documents that
11 says that a health risk assessment is required for
12 the Texaco workers that are immediately across the
13 property line from the Sunrise facility?

14 DR. ODOEMELAM: No, there is not.

15 MS. HOLMES: And is there anything in
16 any of these three documents that you believe is
17 inconsistent with the testimony that you've
18 presented today?

19 DR. ODOEMELAM: No, there is not.

20 MS. HOLMES: And finally, for Mr. Tyler.
21 There was a reference -- and this is in Attachment
22 3 -- on page 332 to the guidelines for preparing
23 health risk assessments for offsite workers.

24 Mr. Tyler, was your analysis conducted
25 consistent with that guideline?

1 MR. TYLER: Yes, it was.

2 MS. HOLMES: And what were your
3 conclusions as a result of that analysis?

4 MR. TYLER: That offsite workers would
5 not be impacted. Significantly impacted.

6 MS. HOLMES: Those are all my questions.

7 HEARING OFFICER FAY: Any recross within
8 the scope of this redirect?

9 MR. GALATI: None from the Applicant.

10 MR. JOSEPH: Just one moment, please.

11 MR. GALATI: I do apologize, Mr. Fay, I
12 do have one -- one question within the scope.

13 HEARING OFFICER FAY: Okay. Why don't
14 you go ahead.

15 RECROSS EXAMINATION

16 MR. GALATI: Dr. Obed --

17 (Laughter.)

18 MR. GALATI: -- where you just read
19 where the hazard index doesn't necessarily --
20 hazard index in excess of one doesn't necessarily
21 mean mitigation, I believe -- I'm paraphrasing.
22 You just read that on cross examination -- I mean,
23 on redirect.

24 DR. ODOEMELAM: Yes, I did.

25 MR. GALATI: Could you read the next two

1 lines, and that's on page -- I think it's on page
2 8 of Exhibit 2 -- Attachment 2.

3 DR. ODOEMELAM: Page 8.

4 MS. HOLMES: I don't think so.

5 MR. JOSEPH: That's not how the pages
6 are numbered in that document.

7 MR. GALATI: And it might be Attachment
8 3.

9 DR. ODOEMELAM: If the ratio exists one,
10 then the risk manager needs to consider whether
11 risk reduction is appropriate. An exceedence of
12 one does not mean adverse health effects would
13 occur; rather, it is an indication of the erosion
14 of the margin of safety for exposure to that
15 chemical.

16 MR. GALATI: Thank you. No further
17 questions.

18 MR. TYLER: I would like to make one
19 additional clarification there that I think is
20 important. I would also point out that a risk
21 number above one in a million does not mean
22 significance, either. EPA routinely makes
23 decisions that range from ten to the negative four
24 to ten to the negative six. And likewise, we
25 would do similar things.

1 There's a judgment call that needs to be
2 made here. These things are not absolutes. We
3 can't just draw a line in the sand. They're not
4 red lines, period.

5 HEARING OFFICER FAY: Recross from CURE?

6 MR. JOSEPH: Just a little bit.

7 RE CROSS EXAMINATION

8 MR. JOSEPH: I'm not sure which of the
9 two should answer, so you guys can decide.

10 (Laughter.)

11 MR. JOSEPH: Are you familiar with the
12 term significance threshold in the CEQA jargon?

13 MR. TYLER: Yes.

14 MR. JOSEPH: For a health hazard index,
15 what is the significance threshold?

16 MS. HOLMES: Excuse me. I'm going to
17 object. He needs to specify which agency he's
18 talking about. Different agencies establish
19 different thresholds.

20 MR. JOSEPH: I --

21 MS. HOLMES: Local agencies have some,
22 some state agencies have them. The Energy
23 Commission staff does not have some.

24 MR. JOSEPH: If you can hold your
25 objection until I finish the question, the next

1 words out of my mouth were at the Energy
2 Commission.

3 MR. GALATI: I would object to exceeds
4 the scope of redirect.

5 MR. JOSEPH: It does not exceed the
6 scope of redirect. There was just discussion
7 about what 1.0 for health hazard index means

8 HEARING OFFICER FAY: The objection is
9 overruled. Please answer the question, if you
10 can.

11 MR. JOSEPH: Let me actually state the
12 full question first.

13 Do you know what the Energy Commission's
14 usual significance threshold is for a health
15 hazard index?

16 MS. HOLMES: Again, I'm going to ask for
17 a clarification. Are you referring to staff's
18 threshold?

19 MR. JOSEPH: Well, we'll make it two
20 questions, then. The first question is staff.

21 MR. TYLER: Yes. The threshold would be
22 one as applied as appropriately to whichever
23 group. There -- as she -- as Caryn stated, there
24 would be a threshold of one based on OSHA
25 standards. There would also be a threshold of one

1 associated with public exposure based on RELs or
2 other appropriate criteria.

3 MR. JOSEPH: But the staff's usual
4 significance threshold for health hazard index is
5 1.0.

6 MR. TYLER: That's correct. If we
7 believe that it's an appropriate hazard index.

8 MR. JOSEPH: Do you believe that that's
9 an appropriate hazard index in this case?

10 MR. TYLER: What I'm talking about is
11 specifically based on the data. If we believe the
12 data --

13 MR. JOSEPH: I'm asking -- I'm asking to
14 interpret the outcome of the modeling in this
15 case. I'm asking you what the significance
16 threshold is that you're using against which you
17 measure the output.

18 MR. TYLER: Yes. It would be a hazard
19 index of one.

20 MR. JOSEPH: Okay. Now, let me ask you
21 the same question. Are you familiar with the
22 Commission's decisions which include discussion of
23 a significance threshold? Are the -- is the
24 Commission's practice also to have a significance
25 threshold of 1.0 for a health hazard index?

1 DR. ODOEMELAM: Well, the 1.0 is just
2 the beginning.

3 MR. JOSEPH: My question is, is that the
4 significance threshold the Commission
5 traditionally uses?

6 DR. ODOEMELAM: Not just by itself.

7 MR. JOSEPH: I'm not asking you whether
8 they use it by itself. Is that the threshold, or
9 is it some other number?

10 DR. ODOEMELAM: No, it is -- it's the
11 same 1.0.

12 MR. JOSEPH: Thank you. That's all.

13 HEARING OFFICER FAY: All right. The
14 next business we have is to -- is to take CURE's
15 testimony on Public Health, but it's late in the
16 day and I'd like to ask Mr. Joseph how long do you
17 think your direct would take?

18 MR. JOSEPH: It's late in the day, and
19 it will take more than probably the allotted time
20 that the Applicant's attorneys have before they
21 have to leave for the airport.

22 HEARING OFFICER FAY: Well, I mean, you
23 couldn't do the direct in an hour?

24 Let's go off the record.

25 (Off the record.)

1 HEARING OFFICER FAY: Dr. Fox is
2 previously sworn. And her testimony has been
3 marked for identification as Exhibit 77. That's
4 the main body of testimony filed on January 3rd,
5 and Exhibit 78, filed as a supplement on January
6 6th.

7 Would you put the microphone close,
8 whoever is going to be speaking? These are
9 proximity microphones, so you have to be fairly
10 proximate for them to work.

11 COMMISSIONER ROHY: And I believe those
12 have a switch on them. I think they should be on.

13 TESTIMONY OF

14 PHYLLIS FOX

15 called as a witness on behalf of CURE, having
16 previously been duly sworn, was examined and
17 testified as follows:

18 DIRECT EXAMINATION

19 BY MR. JOSEPH:

20 Q Dr. Fox, was Exhibit 77 prepared by you
21 or under your direction?

22 A Yes, it was.

23 Q And to the extent that it contains
24 factual statements are those factual statements
25 true and correct, to the best of your knowledge?

1 A They are.

2 Q And to the extent those -- that exhibit
3 contains opinion statements, are those opinions
4 your best professional opinion?

5 A Yes, they are.

6 Q Do you have any corrections to Exhibit
7 77?

8 A I do. I would like to direct your
9 attention to page 2, the top paragraph. When I
10 prepared this testimony there was a recommendation
11 in the Air Quality section to include oxidizing
12 soot filters on the construction equipment. Since
13 I prepared this testimony staff has recanted that
14 recommendation in their supplemental testimony,
15 and therefore I would like to strike the portion
16 of my Public Health testimony that refers to those
17 oxidizing soot filters.

18 It's in the first paragraph on the top
19 of page 2, midway down in the sentence that begins
20 with "workers". I strike the following portion,
21 however, since then air quality staff has
22 recommended imposing post-combustion controls on
23 construction equipment exhausts. And a reference,
24 these controls reduce toxic emissions below levels
25 of concern; therefore, I agree with staff that

1 these controls are, quote, adequate to reduce the
2 contribution of the Sunrise Project to any area
3 acrolein problem.

4 Q And let me clarify, Dr. Fox. In
5 striking that, you're not changing your opinion
6 that the soot filters reduce toxic emission
7 levels, or that they are adequate to reduce the
8 contribution of the Sunrise Project to any area
9 acrolein problem?

10 A No, I'm not.

11 Q Dr. Fox, would you summarize your
12 testimony contained in Exhibit 77, please?

13 A Certainly. I would like to start by
14 saying I support fully my original comments on the
15 PSA, which are included in Exhibit 1 to my
16 testimony, at pages 47 -- 47 to 59, I believe. I
17 have no changes to that based on anything else.
18 My testimony basically was a rebuttal to staff's
19 testimony submitted on December 17th. And I would
20 basically like to summarize what some of those
21 issues are and then go into them.

22 As Obed has pointed out, there are --
23 well, let me back up.

24 My PSA comments found significant
25 impacts, acute health impacts as a result of

1 constructing the Sunrise Project, as a result of
2 drilling the wells within the three-quarter mile
3 radius, as a result of the turbine emissions
4 themselves, and as a result of operating the wells
5 within the three-quarter mile radius. The
6 construction, the well operation, and the turbine
7 acute health impacts were all due to acrolein.
8 The well operation impacts were due to hydrogen
9 sulfide.

10 There are two major areas of dispute.
11 Those are the issue of whether or not risk
12 assessment protocols address offsite workers. And
13 the second one is with respect to the measurement
14 and use of the acrolein emission factor that I
15 use. And -- and in addressing those, my written
16 testimony speaks for itself and I don't think we
17 need to take up anymore Commission time belaboring
18 points that I've already made in writing, so I'm
19 not going to do that.

20 I'm going to jump straight to a rebuttal
21 of the Applicant's testimony, and in the process
22 of doing that the issues will present themselves.

23 MR. JOSEPH: I assume we get some points
24 for that alacrity.

25 COMMISSIONER ROHY: I'm not sure if it's

1 points, but I do appreciate it.

2 (Laughter.)

3 THE WITNESS: Why don't we start with
4 page 7 of the Applicant's Public Health testimony.

5 BY MR. JOSEPH:

6 Q That's Exhibit 73, the testimony of
7 David Stein.

8 A Correct. The comment that the Applicant
9 made is that there was insufficient evidence that
10 background acrolein levels were high, and they
11 basically criticized the measurement program that
12 we implemented. They state measurements obtained
13 should have been obtained by an independent third
14 party and conducted through a carefully structured
15 peer review program. And then they listed off a
16 bunch of things that it should've included.

17 I would like to address that first. I
18 was delighted to see that David Stein relied on
19 this document, because I was struggling with how I
20 could sneak it into the record. But this
21 document, the Community Monitoring Program, is a
22 comprehensive monitoring protocol that was put
23 together by myself, Eric Winegar, the San Luis
24 Obispo County Health Department, the San Luis
25 Obispo Air Pollution Control District, with

1 oversight from the Office of Environmental Health
2 Hazard Association, OEHHA, and also the California
3 Department of Public Health.

4 We spent over six months developing this
5 document, which contains detailed sampling and
6 analysis protocols for ambient monitoring.

7 Q That's Exhibit 74?

8 A That's Exhibit 74. The reason we used
9 Dr. Winegar to do the sampling is because he did a
10 lot of this work. And in the sampling that we did
11 for this project, we used the protocols in this
12 document, with one exception, and that was with
13 respect to the acrolein sampling. As David Stein
14 pointed out in his testimony, this document
15 recommends the use of TO-11 for analyzing
16 acrolein, and we did not use that method in our
17 sampling at the Sunrise Project site.

18 And I'd like to explain to you why that
19 was. TO-11 is the usual method that is used to
20 measure acrolein. It basically captures the
21 sample on a cartridge which is impregnated with
22 DNPH, which is an abbreviation for a big long
23 chemical name. You can't measure aldehydes
24 directly. You have to derivatize them and analyze
25 them as a hydrazone. As far as I know, that's the

1 only method that there is to analyze acrolein.

2 In this work that we were doing here, we
3 were collecting anywhere from one to eight
4 individual samples every single workday, six days
5 a week, and what we discovered in the course of
6 doing that work is there was a lot of variation
7 from sample to sample in the acrolein measurements
8 that we were making. We didn't understand what
9 was going on.

10 Midway through the project, we changed
11 laboratories. We started out using a local lab in
12 San Luis Obispo County, Environmental Analytical
13 Services. We had a lot of trouble with them
14 meeting holding times, so we switched labs midway
15 through and started using Air Toxics Lab in the
16 Sacramento area. Turns out that the technical
17 director of Air Toxics Lab has a lot of experience
18 with the acrolein problem, and we -- and when we
19 explained to him the inconsistencies we were
20 seeing in our measurements, he knew what the
21 problem was because he had done the original
22 research on CARB Method 430.

23 And so we did some experimental work
24 with Dr. Robert Freeman at Air Toxics to further
25 explore the problem with the acrolein analytical

1 method, and ended up developing a method in which
2 you can accurately measure acrolein without this
3 degradation product. And basically, you capture a
4 sample of the air and assume a canister, and
5 analyze it directly. There's no need to
6 derivatize it in this process.

7 And that is the method that we used at
8 Sunrise. It's been validated, and we've been
9 using it at Avila for about the last six months.
10 And it's not reflected in this document, which was
11 written in February of 1999.

12 HEARING OFFICER FAY: You're referring
13 to Exhibit 74?

14 THE WITNESS: Exhibit 74, yes.

15 In fact, the problem with the
16 measurement of acrolein has been well documented.
17 It was originally studied in a contract under --
18 funded by EPA, and there is an EPA report
19 published in the mid-eighties on it. A lot of
20 that work was subsequently published in the
21 referee journal that Mr. Joseph showed to Mr.
22 Stein. And subsequent to that, Dr. Robert Freeman
23 did a lot of research on CARB Method 430, which he
24 presented and published in the Air and Waste
25 Management Association proceedings. And that was

1 followed up by the work that we did at Avila,
2 which we are in the process of preparing for a
3 referee journal article right now.

4 In fact, TO-11, which you heard some
5 discussion of earlier, is a standard EPA reference
6 ambient air monitoring method. And it was
7 modified in 1999 by EPA and published on its Web
8 site. The modification is known as TO-11A, and
9 that modification explicitly discusses the problem
10 with acrolein degradation, and it states that TO-
11 11A is not applicable to acrolein and other double
12 bonded aldehydes such crotonaldehyde.

13 So this problem with acrolein was at one
14 point obscure, but it has now come to the
15 forefront and there is a generally widely
16 recognized problem with this method. We have also
17 had numerous discussions with CARB about this
18 problem. Dr. Winegar has had extensive
19 discussions with Mr. James Moop, who is in the Air
20 Monitoring Division at CARB, about the acrolein
21 problems. He agrees with them, he's aware of
22 them, and in the next modification of CARB Method
23 430 there's going to be a discussion of it and
24 explicit exclusion of acrolein from that method.

25 With respect to the CATEF CARB database,

1 which the parties relied on for their emission
2 factor, I have also had -- I personally have had
3 discussions with the CARB personnel who prepared
4 that database. I originally talked to them in
5 June, which was roughly when I discovered this
6 problem. I immediately called up CARB and I
7 discussed the problem with them. They were not
8 aware, when they published the CATEF Database,
9 that there was a problem with the acrolein
10 measurements. They now are aware of it, and it
11 will be reflected in future modifications.

12 Just for the record, EPA Method TO-11A
13 is from the EPA Compendium of Methods for the
14 Determination of Toxic Organic Compounds in
15 Ambient Air. This is on the EPA Web site. And in
16 here, on page 11A-5, in Section 4.4.1, refers to a
17 bunch of studies. The studies did document that
18 -- aldehydes, such as acrolein, and
19 crotonaldehyde, degrade partially and formed
20 unknown species. And they cite a couple of
21 papers, including the ones that we have been
22 talking about here, as the source for that.

23 So there really is a major problem with
24 the analysis of acrolein and other double-bonded
25 aldehydes in not just turbine exhaust, but in all

1 types of samples and exhaust from construction
2 equipment and exhaust from drill rigs. Virtually
3 all of the source testing work that has been done
4 has used CARB Method 430, and there's no dispute
5 over the fact that in 48 hours, 90 percent of the
6 acrolein that's trapped in the impinger solution
7 is converted into another compound.

8 On the same page, Item 2 --

9 Q Referring to the same page 7 of Exhibit
10 73.

11 A Yeah, the same page, Exhibit 73. The
12 second comment down there is insufficient evidence
13 that acrolein emissions would be reduced by the
14 recommended technology. The allegation there is
15 oxidizing soot filters shouldn't have to be used
16 because we did not put any evidence into the
17 record demonstrating that these devices actually
18 removed acrolein.

19 I would refer the committee to our PSA
20 comments, which are in Exhibit 1 to my testimony,
21 page 39, Exhibit 7. The -- that exhibit contains
22 manufacturer's information that talks about the
23 reduction of aldehydes. In addition to that,
24 there is a well known handbook called "Catalytic
25 Air Pollution Control", which deals with all

1 manner of catalytic processes. And in there,
2 there's a chapter called catalytic consideration
3 that deals with the very type of process used in
4 the Engelhard oxidizing soot filters. It includes
5 a table, Table 9.1, on page 148, which shows
6 acrolein, and it shows that the soot filter
7 removes 90 percent of the acrolein.

8 On the next page, page 8, there is an
9 allegation that soot filters are not cost
10 effective. We really talked about that in the Air
11 Quality testimony yesterday, but I would like to
12 just summarize that there have been studies of the
13 cost effectiveness of these soot filters, and they
14 are indeed cost effective. And I would refer you
15 to my Air Quality testimony on that point.

16 Q Let me just ask you to clarify. You're
17 talking about cost effectiveness for reducing VOCs
18 and PM-10. You would have to modify that analysis
19 if you also looked at the reduction in acrolein
20 emissions as well. Is that right?

21 A That's right.

22 Q Thank you.

23 A It would even be more cost effective if
24 you considered simultaneously CO, VOCs in general,
25 and then toxics.

1 COMMISSIONER ROHY: May I ask a -- just
2 a clarification question. I'm sorry to interrupt.
3 But when you talk about oxidizing catalyst in your
4 testimony, you talk about soot filter oxidase and
5 catalysts. Those are -- you're not referring to
6 -- are you referring those for the gas turbine or
7 for other engines? I'm confused whether -- where
8 you're applying these.

9 THE WITNESS: My remarks with respect to
10 the soot filters were with respect to construction
11 equipment.

12 COMMISSIONER ROHY: Okay. But I believe
13 -- at the end of the day my memory goes, a little
14 bit hard -- hard to recall -- that at some point
15 someone mentioned oxidation filters for the
16 turbines. Is that correct?

17 MR. JOSEPH: Commissioner Rohy, we are
18 also separately recommending an oxidation catalyst
19 for this project, like the many other projects now
20 before the Commission, to reduce acrolein
21 emissions from the turbine.

22 COMMISSIONER ROHY: That is a different
23 type of catalyst; is that correct?

24 THE WITNESS: No, actually it's quite
25 similar.

1 COMMISSIONER ROHY: Physical embodiment
2 is different. The chemical process may be the
3 same -- I'm just trying to understand --

4 THE WITNESS: Yes.

5 COMMISSIONER ROHY: -- what you're --

6 THE WITNESS: The chemical process is
7 very similar.

8 COMMISSIONER ROHY: So what I'm listen
9 to, there are two different things. That's what I
10 want to get my mind clarified on.

11 THE WITNESS: Right. The remarks that I
12 was making, with respect to the bottom of page 7,
13 were specifically with respect to the use of
14 oxidizing soot filters on construction equipment.
15 And the remarks that I made with respect to the
16 top of page 8 as to the cost effectiveness was
17 also with respect to soot filters used on
18 construction equipment.

19 COMMISSIONER ROHY: Thank you.

20 HEARING OFFICER FAY: Dr. Fox, I would
21 just remind you we have only half -- a half-hour
22 left, so you may want to time your presentation to
23 stop at a convenient point.

24 THE WITNESS: I -- I'm working hard to
25 finish this up, believe me.

1 HEARING OFFICER FAY: All right.

2 THE WITNESS: More than you, I want to
3 finish.

4 (Laughter.)

5 THE WITNESS: I -- I can't cope with the
6 thought of having to do Public Health, Worker
7 Safety, Air, and Water all Thursday. I'm trying
8 to go as fast as I can.

9 On the bottom of page 8, Issue 1A at the
10 bottom with respect to the meteorological data. I
11 do not want to engage in a battle over the
12 meteorological data. I would just like to point
13 out that we are alleging short term acute health
14 impacts in this testimony. Acute health impacts
15 are impacts that occur over a one hour period.
16 And with respect to the one hour period, the met
17 data set doesn't make any difference. You get the
18 same answer within plus or minus ten percent,
19 irrespective of whether you use Fellows or
20 McKittrick. So we need not concern ourselves with
21 the minutiae of the met data set issue.

22 On page 9, with respect to the comments
23 about the hydrogen sulfide measurement methods
24 down here, the allegation is the measurements were
25 not made by a recognized reference method. I am

1 not aware that there is any reference method for
2 measuring low levels of hydrogen sulfide in
3 ambient air. The only other method that's
4 available is to collect the sample of gas in a --
5 bag and analyze that, and it is well known that
6 the bag process underestimates impacts because
7 sulfur gases are unstable, and you cannot hold
8 them for more than a few minutes.

9 The Jerome method is the only method
10 that I'm aware of that can measure these low
11 levels of hydrogen sulfide in a portable fashion.

12 I believe comment one on the top of page
13 10, I have already addressed that in my previous
14 remarks, so we don't need to go there. And I've
15 also addressed Item 2 on page 10 in my previous
16 comments, so we don't need to go there again.

17 With respect to Item 3, in the bottom
18 two-thirds of page 10, there is a claim that CURE
19 has provided no analysis of actual test data used
20 to establish the CATEF emission factors. I would
21 like to point you to Attachment 10 to the -- to my
22 testimony that I'm talking about now. I actually
23 included in Attachment 10 an excerpt from one of
24 the source tests that CARB used to establish the
25 acrolein emission factor that all the parties have

1 relied on. And I would also like to point out
2 that when I discovered this problem with the
3 acrolein emission factor, the first thing I did,
4 as I noted, was call up the CARB author of the
5 database and discuss the problem, and I obtained
6 from him a list of all of the source tests that
7 went into developing that acrolein emission
8 factor.

9 We, CURE then secured all of those
10 source tests at considerable cost, and I have
11 looked at all of them. I attempted to attach them
12 to my testimony, but counsel wouldn't let me
13 because it was a stack five feet tall. I was only
14 allowed to attach an extract.

15 COMMISSIONER ROHY: Thank you. Even the
16 Applicant might give you points for that.

17 (Laughter.)

18 THE WITNESS: Those source tests show
19 that much more than 48 hours passed between the
20 collection of the sample and the analysis of the
21 sample for the source tests that went into
22 developing the acrolein emission factor. In fact,
23 it's fairly common when you collect the sample,
24 the first thing you do is you fill out your chain
25 of custody, you box it up, and you ship it off to

1 the laboratory. That happens fairly quickly, very
2 rapidly, in fact.

3 What then happens is the sample ends up
4 in the laboratory's queue, and each type of
5 analysis has a holding time associated with it.
6 And the laboratory, of course, knows what the
7 holding time is for all the samples. And what
8 normally happens in a laboratory is the samples
9 are held under refrigeration until the very end of
10 that holding time, and at the end of that holding
11 time they analyze it. It's an economic decision
12 for managing sample flow through a lab.

13 You hardly ever submit a sample to a lab
14 and get the data back in 24 hours or 48 hours,
15 unless you pay double or more for rapid
16 turnaround, which is hardly ever done in a source
17 testing environment because it's very expensive.
18 One of these acrolein analysis costs 250, 300
19 bucks. And to get it turned around in 24 hours,
20 you'd have to pay five or 600 bucks. And when
21 you're doing a bunch of sampling, that runs into a
22 lot of money real fast.

23 So it's hardly ever done, and when you
24 submit a sample for analysis you get the routine
25 holding time turnaround unless you specifically

1 specify and pay for something else.

2 Then on page 11 of Mr. Stein's Public
3 Health testimony, under Issue 2A, the first
4 bullet. There's a discussion there. We basically
5 did a health risk assessment on construction
6 equipment, drill rigs and the turbines. The
7 Applicant and staff only looked at the turbine.
8 And for the construction equipment, we used the
9 Applicant's estimate of volatile organic compound
10 emissions, and we speciated it by using what's
11 referred to as speciation profiles. What that is
12 is somebody makes a measurement in the exhaust and
13 determines A percent of compound one, B percent of
14 compound two, C percent of compound 3, and so on
15 and so forth. You take those percentages, you
16 multiply them by the VOCs, and you calculate the
17 emission rate.

18 In doing my construction equipment
19 exhaust risk assessment, I used a speciation
20 profile for off road construction equipment
21 published by CARB. The problem with that
22 analysis, though, is that there was not a
23 measurement for acrolein. So I was forced to look
24 into the literature for a speciation fraction for
25 other similar equipment, and the only one that I

1 could find was for medium duty trucks, on road
2 medium duty trucks, in a published journal article
3 which I used.

4 And in this bullet that we're talking
5 about here, Mr. Stein takes -- takes exception
6 with my use of that number, arguing that the CARB
7 speciation profile that I relied on showed that
8 there was .46 percent of C3s. Now, acrolein is a
9 aldehyde compound that has three carbons on it, so
10 it is -- it is a C3. And Mr. Stein argues in here
11 that I should've used a number no higher than .464
12 percent for C3s, arguing that acrolein would be
13 part of that and there'd be other things, so the
14 most that could be justified would be .46, whereas
15 I used 13.85.

16 However, Mr. Stein has misinterpreted
17 the CARB report. If you look at the CARB report
18 carefully, and in particular if you look at the
19 appendices where they talk about the analytical
20 methods, what you find is the aldehydes were
21 measured by Method TO-5, which was a predecessor
22 of Method TO-11. It's the old DNPH method. And
23 that is a high performance liquid chromatography,
24 or HPLC method. That method does not allow you to
25 speciate carbon change like that. In other words,

1 you can't determine C3, C4, C5, C6s, and so on.
2 You can only do that by mass spec. And the mass
3 spec measurements were the measurements of the
4 hydrocarbons, the alkanes and the alkenes.

5 So the C3, C4s, and C5s that were listed
6 at the bottom of the table that had the speciation
7 profile that I relied on had nothing to do with
8 aldehydes. They were for hydrocarbon compounds,
9 unidentified alkanes and alkenes. So this comment
10 is incorrect.

11 Then on the bottom of page 11, there's
12 an allegation that CURE's modeling is flawed. And
13 this gets back to a discussion that we had what
14 seems like an eternity ago, but it was yesterday,
15 I think, in the Air Quality testimony, where I
16 discussed the modeling of construction emissions.
17 And the Applicant modeled construction emissions
18 as four point sources from a stack with a fairly
19 large diameter, and in the revised emissions I
20 believe the stack was ten meters tall. The thing
21 that I took exception to was that they modeled it
22 with an exit velocity of 71 feet per second, which
23 is outrageous for any piece of construction
24 equipment.

25 We, on the other hand, modeled it as a

1 volume source, allowing ten meters of plume rise
2 within the volume, and I recall that I pointed out
3 to you that CARB recommends modeling construction
4 emissions as an area source, which gives an even
5 higher number. So I'd just like to reference you
6 to that testimony, even though this is in Public
7 Health.

8 CURE's modeling is not flawed. The most
9 common method that's used to model construction
10 emissions -- exhaust construction emissions is as
11 either a volume source or an area source. And
12 either of those two methods gives a much larger
13 impact than modeling them as point sources with
14 big stacks.

15 I'm skipping over some things.

16 On page 13, item B, the issue of the
17 significance of the meteorological data comes up
18 again, and I'd just like to emphasize once again,
19 we are arguing about short term impacts, and the
20 meteorological issue has no impact whatsoever on
21 that. We get the same results with both data
22 sets.

23 Okay. I think next I would like to
24 respond to some uses that Mr. Stein made of the
25 Community Monitoring Program Protocol that we

1 developed.

2 I think the first thing Mr. Stein did
3 was read from page 2-19.

4 MS. HOLMES: What exhibit is that?

5 THE WITNESS: Exhibit 74, page 2-19.

6 Mr. Stein read a portion of a discussion on
7 hydrogen sulfide. That discussion was oriented at
8 chronic health effects from hydrogen sulfide. And
9 the problem that we were dealing with is OEHHA had
10 proposed, at the time that we were doing this
11 work, had proposed a draft chronic reference
12 exposure level for hydrogen sulfide of .6 parts
13 per billion, which in my opinion is outrageous.
14 It is much more than normal ambient concentrations
15 of hydrogen sulfide which range between one and
16 three parts per billion. And if OEHHA had
17 published this REL, no project would be able to
18 operate anywhere.

19 So we were trying to lay out an argument
20 for not having to use the proposed chronic REL in
21 this work, because if we had to use that chronic
22 REL this project would not have been able to take
23 place.

24 BY MR. JOSEPH:

25 Q Let me -- you refer to this project.

1 You're talking about the Avila Beach cleanup;
2 right?

3 A The Avila Beach cleanup, or this
4 project, for that matter. No project in the state
5 could operate if a chronic REL of .6 parts per
6 billion were published. And since then, OEHHA has
7 raised it somewhat, but it's still pretty low.

8 And then the next place he went was page
9 221. Could you remind me what you read off of
10 page 221?

11 MR. STEIN: I'd be happy to.

12 THE WITNESS: I don't really disagree
13 with that statement, but I'd like to put it in
14 context. What we were trying to do in this report
15 was establish -- back up.

16 This is -- this document was prepared
17 for a remediation project in a small beach
18 community on the central coast. And we were faced
19 with the problem of people living within several
20 hundred feet of remediating hydrocarbon
21 contaminated soil. And we had to do continuous
22 monitoring to make sure that members of the public
23 were not adversely exposed.

24 And what we were trying to do in this
25 document was establish what we refer to as trigger

1 levels, or concentration that we would measure
2 instantaneously, using an instrument like Jerome,
3 which makes a 24 second measurement. So when we
4 saw that kind of warning or indicator, we could
5 then either shut down the project or make some
6 modification in the operation of the project to
7 assure that members of the public were not
8 adversely exposed from operation of the project.

9 And that's what that statement about an
10 exceedence of an acute REL meant. We were
11 referring to the fact that just because you
12 exceeded acute REL for an hour, or for 15 minutes,
13 or for whatever, that there was not really any
14 indication that there was any public damage.
15 Because what we were doing here were making short
16 term measurements. We were basing the decision of
17 a one hour REL using 24 second measurements. And
18 that's why that statement was in there.

19 COMMISSIONER MOORE: Dr. Fox, can I ask
20 you a question? You started this by saying that
21 you petitioned --

22 (Laughter.)

23 COMMISSIONER MOORE: The end of the day.
24 You started this by indicating that you petitioned
25 to have that standard change. Were you

1 successful?

2 THE WITNESS: I personally did not
3 petition. My colleague who worked on this with me
4 -- there were two of us that had general
5 oversight, myself and a colleague --

6 COMMISSIONER MOORE: Let me ask it a
7 different way, because you're talking several
8 orders of magnitude difference from what you
9 consider to be ambient, versus what they were
10 proposing in the standard.

11 As a result of criticism like that, was
12 it changed?

13 THE WITNESS: Yes, it was raised. We
14 did succeed in getting it raised. Unocal did --
15 was successful in getting comments addressed. It
16 was raised, but it's still quite low.

17 COMMISSIONER MOORE: And at the risk of
18 upsetting everyone, we really kind of are closing
19 up on the end of the time here. Is this an okay
20 break point to stop your -- your testimony and
21 pick it up again on Thursday?

22 THE WITNESS: Sure.

23 COMMISSIONER MOORE: Then let me just
24 ask one clarifying question before it goes
25 straight out of my head before we come back on

1 Thursday. And that is, for the sulfur compounds
2 which have such a short life, where they're --
3 literally, you have to capture them and analyze
4 them in a fairly rapid -- at a rapid pace. What
5 does that say about that compound in the greater
6 environment? How long is it toxic?

7 If it -- if -- in other words, I'm not
8 a chemist, you already know that. But if -- if a
9 -- the compound has to be captured and then
10 analyzed very quickly, or it degrades into some
11 subcompound, or some set of other compounds, which
12 I presume are either more or less toxic. They go
13 one direction or the other, at the end of that
14 degradation cycle.

15 What happens to the sulfur compound in
16 the greater environment, where it's dispersed
17 through -- dispersed and goes into much lower
18 concentrations. How -- what happens to it, it
19 degrades at the same rate?

20 THE WITNESS: Yes. If -- I need to give
21 you a two part answer. If you emit a certain
22 amount of sulfur compounds and then you stop,
23 just, you know, a burst --

24 COMMISSIONER MOORE: Right.

25 THE WITNESS: -- it will degrade fairly

1 quickly in the environment. It will react with
2 other things, as for the chemical reactions and
3 interactions among different chemicals. However,
4 if you have a continuous emission source, the
5 hydrogen sulfide would be continuously emitted.
6 So you would have a stable concentration in the
7 environment.

8 COMMISSIONER MOORE: That makes -- that
9 makes sense.

10 THE WITNESS: When you collect the
11 sample in a tedmar bag, you have it in a enclosed
12 isolated environment, and the compounds in that
13 enclosed isolated environment react with one
14 another to form other things. It's a major
15 problem with analyzing sulfur species. They're
16 very, very difficult to analyze for that reason.

17 COMMISSIONER MOORE: So where there's a
18 short term or a first emission, and it degrades
19 the -- whatever it degrades into and disperses in
20 the environment is no longer volatile, or no
21 longer as toxic, or is it more toxic?

22 THE WITNESS: It depends. You would
23 have to ask Dr. Winegar the questions about the
24 specific chemistry of sulfur compounds in the
25 environment. I think hydrogen sulfide, for

1 example, reacts with mercaptans, and I'm not of
2 what all the reaction products are, and I cannot
3 tell you as I sit here whether they're more or
4 less toxic.

5 I do know, however, that hydrogen
6 sulfide does degrade into other sulfur compounds.

7 COMMISSIONER MOORE: All right. Well,
8 with all due apology to everyone who's put in a
9 lot of hard and long hours, which I appreciate,
10 including -- and you know, I didn't acknowledge
11 this, but we -- we forced the issue on the holiday
12 stuff, and, of course, that meant that we got
13 backed into doing some of our homework as well,
14 perhaps not -- not nearly as much as all of you.

15 But to those of you whose holidays I
16 ruined by my -- my ruling, I do apologize. And
17 all I can tell you is that I -- as I roll into
18 next week looking at taking over Commissioner
19 Rohy's case and facing this exact same cycle
20 again, I'm sympathetic. And I offer you my
21 apologies.

22 We're going to have to stop this and
23 come back on Thursday morning. And Gary, do you
24 have any housekeeping for tonight?

25 MS. POOLE: Can we do a brief bit of

1 housekeeping?

2 COMMISSIONER MOORE: Sure.

3 MS. POOLE: I neglected, I believe, to
4 move Professor Fry's testimony in. It's been
5 marked as Exhibit 72.

6 HEARING OFFICER FAY: Any objection?

7 All right, that's entered.

8 (Thereupon, Exhibit 72 was received
9 into evidence.)

10 MR. JOSEPH: And while we're at it, can
11 we also move in Exhibit 74, which is the --

12 COMMISSIONER MOORE: Didn't we move
13 that?

14 HEARING OFFICER FAY: Is there
15 objection? The Avila Beach community study.

16 MR. GALATI: No objection.

17 HEARING OFFICER FAY: All right.

18 (Thereupon, Exhibit 74 was
19 received into evidence.)

20 MS. HOLMES: When are we going to be
21 able to get copies of that?

22 COMMISSIONER MOORE: You've got my copy
23 right there. You can take that, and why don't we

24 --

25 (Parties speaking simultaneously.)

1 MR. GALATI: Caryn, you can have that --
2 you can have that copy. That's my copy.

3 MS. HOLMES: Thank you.

4 MR. JOSEPH: And we'd also like to move
5 in --

6 COMMISSIONER MOORE: So there was no
7 objection.

8 MR. JOSEPH: Exhibit 77, Dr. Fox's
9 Public Health testimony.

10 HEARING OFFICER FAY: And Exhibit 78, as
11 well?

12 MR. JOSEPH: And Exhibit 78, as well.

13 HEARING OFFICER FAY: Any objection?

14 MR. GALATI: No objection.

15 HEARING OFFICER FAY: All right.

16 Thanks.

17 (Thereupon, Exhibits 77 and 78 were
18 received into evidence.)

19 MR. GALATI: I failed to identify the
20 testimony, the written testimony of Bill
21 Vanherwig, Biology. Can I identify and have that
22 moved in, as well?

23 COMMISSIONER MOORE: Bill Vanherwig's
24 testimony on Biology will be designated as Exhibit
25 79.

1 HEARING OFFICER FAY: That'll be Exhibit
2 79, William Vanherwig's testimony will be
3 designated as Exhibit 79.

4 (Thereupon, Exhibit 79 was marked
5 for identification.)

6 HEARING OFFICER FAY: And is there
7 objection to Mr. --

8 MS. HOLMES: Seventy-nine?

9 HEARING OFFICER FAY: Seven-nine.

10 MS. HOLMES: Thank you. No objection.

11 HEARING OFFICER FAY: Vanherwig's
12 testimony on Biology.

13 MR. GALATI: Thank you.

14 HEARING OFFICER FAY: No objection?
15 It's entered.

16 (Thereupon, Exhibit 79 was received
17 into evidence.)

18 HEARING OFFICER FAY: And then let me
19 just quickly ask, do the parties have any
20 preference over the way we try to load things on
21 -- on Thursday? We have additional Air Quality
22 testimony to take. We have agencies coming in.
23 We have to finish up Dr. Fox's testimony and --
24 and cross examine her on Public Health. We have
25 Soil and Water Resources to deal with.

1 MS. HOLMES: We also have System
2 Effects. TANC wants to cross examine staff's
3 witness. The residual air quality issue. Mr.
4 Hesters.

5 HEARING OFFICER FAY: Thank you.

6 MS. POOLE: Did you identify the
7 remainder of the Air Quality testimony?

8 HEARING OFFICER FAY: Yes, uh-huh. We
9 have to finish up here. And I guess I sort of
10 lumped that in. TANC will come in there when
11 Hesters testifies.

12 COMMISSIONER MOORE: It's going to be a
13 long day on Thursday. We're going to have to --
14 everybody's going to have to tighten up their
15 questioning to get through.

16 HEARING OFFICER FAY: Anyway, that's
17 what we have to deal with, and if we don't hear
18 from you, the committee will just determine the
19 best order to take these and do our very best.

20 Any other comments before we adjourn?

21 MR. GALATI: Just my very quick
22 recommendation would be Public Health, then go to
23 Worker Health and Safety, since they're somewhat
24 related. Then in the afternoon, when we have the
25 air district and EPA, move to Air, finish up Air,

1 lastly go to Water.

2 HEARING OFFICER FAY: Public Health,
3 Safety, Air, and then Water.

4 COMMISSIONER MOORE: Okay. You know
5 what that means. By taking Air late, that way
6 just everyone be prepared that we may -- Dr. Rohy
7 will not be here, he'll be in Washington that day.
8 We may have to go into the evening, so be
9 prepared.

10 All right.

11 HEARING OFFICER FAY: All right. Thank
12 you, we are adjourned.

13 (Thereupon, the hearing was adjourned
14 at 5:00 p.m.)

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CERTIFICATE OF REPORTER

I, DEBI BAKER, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Evidentiary 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, now in any way interested in the outcome of said Hearing.

IN WITNESS WHEREOF, I have hereunto set my hand this 18th day of January, 2000.

DEBI BAKER

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