EVIDENTIARY HEARING

BEFORE THE

CALIFORNIA ENERGY RESOURCES CONSERVATION

AND DEVELOPMENT COMMISSION

In the Matter of:	)	
	)	
Application for Certification	)	Docket No.
for the Morro Bay Power Plant	)	00-AFC-12
Project	)	
	)	

VETERANS MEMORIAL BUILDING

209 SURF STREET

MORRO BAY, CALIFORNIA

WEDNESDAY, MARCH 13, 2002

9:07 a.m.

Reported by:
James A. Ramos
Contract No. 170-01-001

COMMITTEE MEMBERS PRESENT

William Keese, Chairman, Associate Member

HEARING OFFICER AND ADVISORS PRESENT

Gary Fay, Hearing Officer

Terry O'Brien, Adviser to Chairman Keese

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Nancy Castle

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P R O C E E D I N G S

9:07 a.m.

CHAIRMAN KEESE: We will call this hearing to order. We're going to finish up with land use, and then move into our other topics, which are slated for hearing on the 13th of March.

Mr. Fay.

HEARING OFFICER FAY: Thank you, Commissioner. When we broke off yesterday we were about to begin the presentation of evidence on land use by the City of Morro Bay. And I'll ask Mr. Schultz if he's ready to proceed?

MR. ELIE: Yes, we are. The City calls Robert Schultz, who has previously been sworn.

DIRECT EXAMINATION

BY MR. ELIE:

Q Mr. Schultz, exhibit 173 is your prefiled testimony with respect to land use. Did you prepare that testimony?

A Yes, I did.

Q Is it true and correct to the best of your knowledge and understanding?

A Yes, it is.

Q Do you have any corrections, changes or modifications?

A No.

Q Briefly, Mr. Schultz, could you explain generally what the City has done regarding land use issues since Duke filed the first AFC, which was withdrawn, and then subsequent to that with the AFC that's presently before the Commission.

A Well, very early on when it was withdrawn we hired the firm of Sheppard, Mullin, Richter and Hampton to a full analysis of all of our ordinances, rules, regulations and standards and give us a consistency opinion. And that was done in April of 2001. And that was -- and I believe it's exhibit 155.

Q It's also an exhibit to your declaration which is 173?

A That's correct.

Q Did the City also hold public hearings?

A Yes, numerous public hearings were held. We went through the process. Early on when the AFC was first withdrawn we met with CEC Staff, CEC Commissioners to try to determine what the best path to take.

We knew that Duke was going to refile an application, and was basically told the way to go about this was to try to reach an agreement with

the applicant that would resolve all the local issues.

And so we did that with the cooperation of Duke. Many many public workshops were held on various issues, determining what issues were important. And to determine if the project was consistent with our LORS.

Q And did that set of negotiations result in the agreement to lease, which is exhibit 95?

A Yes, it did. Prior to the agreement to lease we entered into an MOU which was more of a roadmap. And that's exhibit 3 and has already been entered into evidence. And that road map then took us into the agreement to lease, which both sides are in agreement to that agreement to lease.

It has not been finalized and executed because our outside legal counsel felt that it should not be executed by the City until the full analysis is done by the CEC so that there's CEQA coverage.

Q So, the agreement to lease necessarily needs to be in draft form until the FSA is, at minimum, complete and then the City Council makes its own CEQA findings?

A Yes. And this goes back to the reason from having these workshops, it was the hope of the City that it would not even have to be here as an intervenor, that the entire FSA would come out at one time; we would be able to then execute the agreement to lease prior to any evidentiary hearings and know that that agreement was finalized by both sides.

Unfortunately, because of the fact that the FSA has come out in different parts we have not been able to have the complete FSA for our CEQA coverage, and therefore were required to intervene.

Q Would you summarize your testimony on the general plan and the coastal land use plan?

A Yes. As far as the consistency, the City is still in agreement with the April 2001 report done by Sheppard, Mullin. We find that the Morro Bay Power Plant project is consistent with the coastal dependent industry base zone. And that it's consistent with the general plan and local coastal plan, just as both Duke witnesses stated, and staff of the CEC has stated.

Q Would you summarize your testimony on zoning compliance and explain the City's

interpretation of its own zoning ordinances with respect to the construction?

A Yes. And basically this is where the City differs with the testimony of Duke and the CEC. All parties agree that the property is currently zoned in the M2PDI for coastal dependent industrial with a planned development and -- use overlay. And that's found in the Morro Bay zoning map and also in the zoning code.

Where we differ is the fact that in the zoning code section, the table 17.24.150 states a maximum of 30-foot height in the M2 zone. And that maximum height of 30 feet applies to new construction only, and does not apply to the replacement and repair of the existing structures.

It's the City's position that this is not a replacement or repair, but existing structure.

The new plant has a different design, a different configuration, different impacts, different efficiencies, and really a different function completely, which to the City is a new facility, new construction and new development and not a repair or a replacement.

I've been the City Attorney for the last

four years, and prior to that, Assistant City Attorney, and under all circumstances where an exemption from a height regulation is given, it's done in the case where there is a repair or a replacement, in the case if there's a fire or demolition, the exact structure that's going to be replaced in the exact location, then we will grant that height exemption or other setback exceptions.

But if the applicant comes in with a completely different project, it's considered new construction. It would not fall under the repair and replacement.

And for that reason the City considers this a new construction, and therefore the maximum height of 30 feet and the M2 zone applies.

So you do have to go the next step, which is that the building height can be modified but only on the approval of findings that there is a greater than normal public benefit that may be achieved by such deviations. And that's found in the zoning ordinance 17.40.030D.

And it states those benefits may include improved or innovative site, and cultural design, greater public or private usable open space, extraordinary public access or protection of

environmentally sensitive habitat areas. In all cases they must meet applicable coastal land use policies.

So the primary area where we differ is that it is the City's position that this is new construction, and that the 30-foot height does apply. And that you do need to find a greater than normal benefit.

It's the City's position that you can find that greater than normal benefit if you include not only the project description that Duke has agreed to, but also some of the key elements of the agreement to lease that has been negotiated to reach that greater than normal benefit.

Q Before you get there let's go back to the first one under zoning compliance. Is it the City's position and your testimony that in order to be consistent with what other projects are required to go through in the City as far as complying with the zoning ordinance, in order to be consistent this project needs to be treated as a new construction?

A Yes.

Q Why don't you then tell the Commission, further testify regarding the greater than normal

benefits and areas of the agreement to lease which the City believes assists in finding greater than normal benefits, if they were within the conditions.

A Yes, as my testimony states, without the agreement to lease we really found that Duke has agreed to demolish the existing exhaust stacks and turbine building. They're going to replace the existing plant with a more efficient facility that is designed to minimize view impacts, and that's taking into consideration that there isn't dry cooling, which would change that greater than normal benefit tremendously.

The third was a remodeling of the water intake facility facade; the construction of bike and pedestrian paths around the Morro Bay Power Plant, and the construction of the bridge across Morro Creek.

And when my testimony was done that was even before. We've now been informed that there is a possibility that the Morro Creek bridge would become temporary, which would then take away one of the greater than normal benefits, it's even a project description, and in fact, would really take away any bike paths in that area because they

would lead to nowhere, except the Creek, and wouldn't have a crossing for access.

So, we do have concerns with that issue, but I think that will be resolved later on as opposed to the land use sections.

I understand Duke's and CEC's issues regarding putting commercial agreements into the CEC conditions. The City's primary concern, though, is it is a very small city with limited resources and to every extent possible -- the CEC for enforcement mechanisms. It desires to do that.

I can go through my testimony as to the key elements of the agreement to lease that we consider greater than normal benefits, and possibly revise that testimony a little bit.

Q Go ahead.

A With regard to the outfall lease we feel that's already incorporated in the land use 1, in that it will require an outfall lease to be obtained. So, in fact, it already is in the land use 1.

We do have an issue, though, that we don't feel that it is prudent to require the outfall lease to occur November 15th; it really

should be at an earlier date prior to commencement of construction so that we don't have a possible train wreck or an issue where a project would have to be stopped because an outfall lease hadn't been obtained.

And also I believe Duke would require to have control over the site prior to even a certification which would require the long-term lease. So I think it's prudent to move that date up to an earlier date that satisfies everybody's needs.

With regards to the City building and impact fees, that's a greater than normal benefit, it's just a mechanism of the City fees that will need to be paid. It's going to happen one way or another, so I'm not that concerned with it. That's included in a condition of certification. So, not to beat heads with the CEC Staff, or with Duke, I'm all right with that. That's going to occur through the normal process of applying; most of those are state fees that have to be paid for seismic reasons and for state housing reasons.

With regards to the public service department project liaison, the City feels this was a very important element that was a greater

than normal benefit.

The City is a very small city with a very small number of employees. During the six-year period of this construction process there's going to be many public questions, requests, the ability to let the public know when construction's happening, whether access is cut off, we believe can be entirely handled by a CPM.

And therefore we negotiated a project liaison person and feel that this is a greater than normal benefit that could be incorporated into this section to satisfy both Duke and the City.

With regards to the real property tax, the City agrees that's a commercial relationship and are fine in dealing with that separately in our agreement.

With regard to the franchise fees, we feel this is a very key component to the greater than normal benefit. The history of this power plant is that our ordinance regarding franchise fees was enacted, I believe, in number 12, so I believe it was enacted in 1965.

From 1965 until 1998 the City received approximately $50,000 a year from PG&E for our

franchise fees. It was PG&E's position that since it bought its natural gas from one of its subsidies it therefore was exempt from the franchise fee ordinance and did not receive very little in the way of franchise fees.

In negotiations with Duke, Duke is obligated to pay that franchise fee regardless of whether they purchase it from a subsidiary. And we think that's a very important greater than normal benefit for this project, and that will insure that the City will receive those franchise fees throughout the life of the project.

With regards to long term revenue guarantee that deals with the obligation that the City will receive a minimum of $2 million with the combined real property tax, franchise fees and outfall lease rent. We agree that's a commercial relationship between the two and are okay with not including that as a condition of certification at this time.

The same goes for the sales use tax, revenues on major equipment purchases.

With regards to reimbursement for unforeseen financial impacts and the transient occupancy tax, I've already testified to those two

under socioeconomics.

We believe that both of these should be included in the socioeconomic section, or under greater than normal benefits in the land use section. They're both applicable to those sections. They're both very important to the City.

Although the City agreed that the impacts cannot be predicted, it allows a mechanism, and would probably use the CPM or someone else to arbitrate that decision if, in fact, there are impacts to other departments within the City. Or with our transient occupancy tax.

And, again, I believe Duke's testimony at the socioeconomics was they did not have a problem with including those two in the conditions of certification.

With regards to the first closure and the $1 option to purchase the land, we believe that's a commercial operation, a commercial agreement between Duke and the City, and are okay with not including that in the conditions of certification.

With regards to police and the fire

department reimbursement, that is really already a condition of certification under the worker safety. Duke is going to require an -- I believe the condition is is an agreement will have to be reached between the City and Duke. So it's already covered in another issue.

With regards to the highway 41 Atascadero north of Embarcadero improvements to 1.4, we've testified that in traffic, and that is probably the best place to put that condition of certification. And Duke did not have an issue with including it as a condition of certification and we're still requesting it in that section.

Probably the biggest one that is not in land use for the City and really reaches that greater than normal benefit, and I believe even in the CEC FSA analysis, is the dedications of land. The CEC's FSA analysis, I think, five or six times, to meet the consistency requirements and to meet the greater than normal benefits, stated that there would be a conveyance to the Den Dulk property, the Coleman Park property. However, there's no condition of certification that requires Duke to do the dedications of those lands.

And it's very important really that the City obtain those lands. That's how we really reached the greater than normal benefit more than any other item on here. It gains control a parcel of the Den Dulk, Coleman Park, which has been in our watermaster plan, which has been in other plans that have been done through the City over the years, and has been a key component for the City to try to obtain that land. And through the negotiations we were able to do that.

The other parcels is what we call the second finger, which is the other area where there should have been another intake building, if, in fact, PG&E had expanded. Taking control of that land and the land right behind it, which we consider the triangle property, is where the City possibly intends to put in their boatyard, which is throughout all of their planning documents.

Q Let me interrupt you right there. The land dedication issue then, the City's issue, as I understand it, is it that Land-10 says dedications or conveyances, but they don't say which specifically. And the condition of certification should list revenues that Duke is granting, is that --

A Correct. We consider Land-2 a separate complete issue. Land-2 deals with the public conveyances under the Warren Alquist Act and the Coastal Act, whereas the greater than normal benefit should be a separate land condition which would require these dedications because our number one concern is in the FSA testimony they specifically state -- Mr. -- had mentioned this, that the -- on page 3 -- 47, after mentioning, you know, six different times that the City would obtain Den Dulk and Coleman Park, he then states that the project owner potentially managed to submit a land offer different from those being discussed with the City. The public use land dedication is not limited to land within the vicinity of the City of Morro Bay.

And if the only land dedication was outside the City of Morro Bay, we do not see that there would be a greater than normal public benefit for the citizens of Morro Bay without the land dedications.

Q Okay. I interrupted you, would you quickly summarize the rest of the agreement to lease sections that the City is asking for?

A With regards to the conservation

easements which was in the agreement to lease, and that Duke agreed to protect certain areas of the project site, we believe that's going to be handled in the Bio section, so we're fine holding that off until that time.

With regards to the restrictive covenants we're all right with that being a commercial agreement between the City and Duke, and not concerned with that being added as a condition of certification. And also the financial guarantee.

With regards to the use of the City property, that also is a commercial agreement. I would point out, though, that there is in the agreement to lease where the City will agree to grant easements along both sides of the bridge.

And as I stated yesterday that without a permanent bridge, the City would not be willing to grant those easements, because we do not believe there would be any greater than normal benefit to grant those easements for a temporary bridge.

And with regards to the demolition of the existing plant, we also believe that's a commercial arrangement and therefore would not need to be included in the conditions of

certification.

Q So is it fair to say then the recommendation of condition of certification when we brief it will be smaller? The portions of the agreement to lease?

A As to the land use section I see that there are two major ones, and that is the project liaison and the land dedications. And then also making absolutely certain that it is a permanent bridge, that it is a -- that the bike paths are actually not just for maintaining, but that they will construct them. With that, we do reach the greater than normal benefit.

Q Okay.

MR. ELIE: With that I would move the admission of exhibit 173 and the three exhibits mentioned therein, 49, 101 and 155.

HEARING OFFICER FAY: Is there objection? All right, I hear none, so moved.

MR. ELIE: Okay, and then I just have one small piece of rebuttal testimony from Mr. Schultz.

BY MR. ELIE:

Q Mr. Schultz, Duke has made a proposed change to Land-4 with respect to an unforeseen

event that requires limiting access to protect the public health and safety, and has agreed, by my questioning, to have that determined by the CPM. Does the City agree with that?

A Yes. Yes, it is.

Q Okay.

MR. ELIE: The witness is available.

HEARING OFFICER FAY: Mr. Ellison.

MR. ELLISON: Thank you.

CROSS-EXAMINATION

BY MR. ELLISON:

Q Mr. Schultz, just a couple of questions. First of all, there was some discussion in cross-examination of the staff regarding the City's land use policy 5.22 regarding air emissions. Do you recall that?

A Yes, I do. Let me get to that policy, though.

(Pause.)

MR. SCHULTZ: What policy is it, again?

BY MR. ELLISON:

Q I believe it's 5.22.

A Okay.

Q Do you have that in front of you now?

A Yes, I do.

Q First of all, as City Attorney, do you interpret that policy as applying to the emissions of any particular pollutants as opposed to emissions generally?

A Emissions generally.

Q If the Commission were to find that the proposed project complies with all applicable air quality standards, and further were to find that the project does not create a significant adverse impact on public health, do you believe, as City Attorney, that this policy would be satisfied?

A Yes.

Q Turning now to the question of greater than normal benefits and the restriction on height of structures of 30 feet, I just want to ask you a couple questions about that, as well.

As I understand it it's the City's position, in contrast with the staff and Duke, that this 30-foot height restriction applies, is that correct?

A Correct.

Q Would it be fair to say that the purpose of the 30-foot height restriction is to minimize the height of structures?

A I would say that's one of the main

components of it.

Q And would it be fair to say that the purpose of minimizing the height of structures is to preserve views of the Bay and preserve the low-rise character of the waterfront?

A One of the key components of it.

Q If the project were before the City and not the Energy Commission, and the City were making this decision, assuming that it applies, of greater than normal public benefits, and the City were to determine that there were not greater than normal public benefits, then am I correct in assuming that it would deny the project?

MR. ELIE: Incomplete hypothetical. There's so many assumings in there that I don't know if he can answer that.

MR. ELLISON: Okay, well, let me restate the question. That's a fair objection.

BY MR. ELLISON:

Q Looking only at this particular policy, is it not the case that a failure to find greater than normal public benefits would mean that the policy would not be met, and the exemption for structures greater than 30 feet would not be allowed?

A Not necessarily.

Q So is it your position that the City could go ahead and approve the project notwithstanding that it does not find greater than normal public benefits, assuming again that that finding needs to be made?

A I believe that finding needs to be made. It might be, with your hypothetical, a way to do it as an exemption or a variance from that height restriction without doing a greater than normal benefits.

But if you follow the plan development zone area, which it also falls in, then you do have to meet the greater than normal benefit. So there's actually two separate issues.

Under the zoning of M2 I believe you could grant an exemption; but then when you go to the PD overlay zone, to deviate from those standards you do need to find a greater than normal benefit.

Q Is it then your testimony that -- this is really quite a simple question and I don't want the record to be confused -- is it your testimony the City would need to find greater than normal public benefits to allow a structure for this

project at this site greater than 30 feet?

A Yes.

Q Okay. And if it did not make that finding it would then not allow a structure for this project at this site of greater than 30 feet?

A Yes.

Q And if that were to occur the existing project would remain in place, is that not correct?

A Correct.

Q And the height of the existing structure is 450 feet, is that correct?

A Correct.

Q Is it not more consistent that the purpose of this policy of minimizing the height of structures to modernize this plant and reduce the height of the stacks from 450 feet to 145 feet, than to allow the existing project to remain in place?

MR. ELIE: You mean other than the fact that it was there before the statutes were enacted?

MR. ELLISON: That's right.

MR. SCHULTZ: -- that it was beforehand, but again, the greater than normal benefit

applies. That's just one piece of the puzzle, is to reduce the height limits, but it also looks at other key components.

So, if the question is is by reducing the height does that meet a component of the greater than normal benefit, absolutely.

BY MR. ELLISON:

Q Well, that was part of my question, but it's not all of it. Let me come at this a different way.

Is it not fair to say that the reason that the policy requires a greater than normal public benefit is to offset the public disbenefit of allowing a structure higher than 30 feet?

A Yes.

Q And isn't it the case here, in the unique circumstances of this project, that allowing the 145-foot stack creates the benefit, not the disbenefit, but the benefit of reducing the height of structures along the waterfront from 450 feet to 145 feet?

A As to that one component of the project, yes. But there is also many other detriments that go into that equation.

Q Okay. But with respect to this policy

of minimizing the height of structures along the waterfront, would you not agree that 145 feet accomplishes that purposes than 450 feet?

A Yes.

MR. ELLISON: That's all I have, thank you.

HEARING OFFICER FAY: Ms. Holmes?

MS. HOLMES: No questions.

HEARING OFFICER FAY: Does CAPE have any questions of the City?

MS. CHURNEY: Yes.

CROSS-EXAMINATION

BY MS. CHURNEY:

Q Going back to coastal land use policy 5.22, which states that the emission levels must be maintained, there is nothing in that coastal land use policy that states that the interpretation of emission levels should be general as opposed to specific emission levels, are there?

A No, it just states that it shall conform to the standards of the federal and state pollution control requirements and emission levels be maintained.

Q So there's nothing in that coastal land

use policy that would preclude it from being interpreted to apply to specific pollutants as opposed to generally, is that correct?

A Again, it just states that it shall conform to the standards of the federal and state pollution control requirements. It doesn't mention anything about specific pollutants.

Q And it doesn't mention anything about pollutants in general, either, does it?

A My interpretation is it is in general because it's got to meet all of the standards of the federal and state requirements, and that would be generally.

Q But there's nothing in that policy that precludes it from it being interpreted to apply to a specific pollutant?

A No.

Q The Sheppard Mullin memo that you referred to and that is a basis for your testimony of April 11, 2001, came out long before the FSA came out, is that correct?

A Correct.

Q And it also came out many months before Duke finally provided responses to data requests in August 2001, the actual size of the new plant

compared to the old plant, correct?

A Could you restate that question?

Q Yes, that Sheppard Mullin April 2001 memo came out several months before Duke provided the actual size of the new plant as compared to the old plant in its August 2001 data request responses?

A That is correct.

Q Now, Sheppard Mullin did not know when it prepared its memo the size of the new plant, is that correct?

A That's correct.

Q And they didn't know that the size would increase from 9.61 acres for the old plant compared to 14 acres for the new plant?

MR. ELIE: Are you talking about the testimony you tried to elicit yesterday about the footprint?

MS. CHURNEY: Correct.

MR. ELIE: With that in mind.

MR. SCHULTZ: When the memorandum was done, it was done prior to the entire site plant being finished, if that's your question.

Whether Sheppard Mullin agrees to whether the footprint is now 14 acres as opposed

to nine, is a different issue.

BY MS. CHURNEY:

Q Well, there is nothing in the Sheppard Mullin memo which indicates that they knew that the size of the footprint of the new plant was increasing into 14 acres compared to the size of the old at 9.61 acres, is that correct?

A Correct.

Q Do you think that fact might possibly affect Sheppard Mullin's conclusions that the new plant is not an expansion as that term is used in the City's general plan?

A No.

Q And what is the basis for your opinion?

A When we received the entire FSA and project site plant it was given to Sheppard Mullin to review for consistency issues and their determination did not change from the April 2001 memo.

Q So they did not revise the April 11th memo after seeing the change in size or take it into consideration after seeing the change in size, to the best of your knowledge?

MR. ELIE: Well, I'm going to object to the question to the extent that it implies that

the change in size, counsel's characterization, I think there's been testimony to the contrary as far as mass and it depends upon how you define size.

I'm happy to let him answer that with that qualification.

MR. SCHULTZ: They did not amend the April 2001 memorandums. They have done other confidential memorandums to the City in regards to this issue, and issued the same opinion, that it is consistent with our land use policies.

BY MS. CHURNEY:

Q Well, wouldn't you agree that an increase from 9.61 acres to 14 acres is an increase in size?

MR. ELIE: Same objection.

MR. SCHULTZ: Yes. If you look at the FSA analysis it's comparing apples and oranges as to the 9. acres to 14 acres.

BY MS. CHURNEY:

Q But it is an increase in size, correct?

A No, like I said, you're comparing apples and oranges. If you look at the testimony in the FSA, which I can cite for you because I think it is important you do read that.

Do you have the page on that? I know it was cited yesterday.

MR. ELIE: 3-32.

MR. SCHULTZ: 3-32. No, that didn't give the description of the 9 to 14 acres.

MS. CHURNEY: It's 3-10.

MR. SCHULTZ: 3-2?

MS. CHURNEY: Ten.

MR. SCHULTZ: If you look at it when they did the 9.61 it includes the power plant buildings, the transformers, stacks, shops, warehouse and office buildings and parking.

And when you compare the 14 acres you're really comparing power plant equipment and structures, transformers, combined cycle units, heat recovery steam generators, -- generator enclosures, administrative warehouse, control building, substations, a sound wall and a transmission corridor to the existing PG&E and electrical substation.

So you're taking the nine acres and then comparing it to an apple to an orange. So, and again I go back to Duke's testimony. And what Sheppard Mullin has stated is that it's not an expansion because of the actual mass of the

building is much less.

BY MS. CHURNEY:

Q Well, I guess I don't understand this apples to oranges position that you're taking. It appears to me that what they're talking about is the footprint. The footprint is what is taken up by buildings relating to the generation of power. It looks like it's pretty much the same. There is some additional structures with the new project, but they are buildings or structures --

A Could you tell me where in that paragraph it says that the footprint is compared to the footprint in the other, the new project because I --

Q It -- it --

A -- don't believe it says footprint anywhere.

Q Yeah, first line.

MR. ELIE: But doesn't say footprint -- the 14 acres, I think, is the point. I think counsel's point has been made. I don't know where we're going with this.

HEARING OFFICER FAY: Yeah, if that's an objection --

MR. ELIE: That's an objection.

HEARING OFFICER FAY: -- the question's been asked and answered. Move on, please.

MS. CHURNEY: I have no further questions.

HEARING OFFICER FAY: Okay. Do you have some redirect?

MR. ELIE: Yeah, I might.

(Pause.)

MR. ELIE: No redirect.

HEARING OFFICER FAY: Okay. Mr. O'Brien has some questions.

EXAMINATION

BY MR. O'BRIEN:

Q Mr. Schultz, I have a question for you. It goes to the issue of greater than normal benefits and the City's perspective of that issue.

Given everything that's contained in the staff FSA in terms of the conditions of certification that Duke will be required to meet, is it the City's position that based upon those conditions of certification, proposed conditions of certification, that the project that would be sited under those proposed conditions of certification does not possess greater than normal benefits?

A Yes, that's the City's position as the proposed FSA conditions of certification presently state.

MR. O'BRIEN: Thank you.

HEARING OFFICER FAY: And anything from -- I have a few questions, Mr. Schultz.

EXAMINATION

BY HEARING OFFICER FAY:

Q Are you familiar with the, at least some of the preliminary alternative designs for an aquatic filter barrier that the Gunder-- Company has offered, and I think Duke has provided to the record?

A Yes, I am. We did a full analysis of that and have brought it to Council; in fact, Monday night they passed a resolution regarding the dry cooling and the hybrid cooling methods.

Q And are you familiar with the alternatives that include the addition of docking space in conjunction with installing the filter barrier?

A Somewhat familiar with it.

Q If additional docking space was put in the waterfront area that was accessible to either commercial fishermen or the public or both, would

that be consistent with the City's policy to preserve a fishing village atmosphere?

A Yes, it was. We do have some unique ordinances in that area that would come into play, though, especially when the charter boat was mentioned. That would not be allowed under one of our ordinances. From Beach Street all along the Embarcadero all businesses in that area need to be fishing-related or ancillary to the fishing industry.

So they would have to somehow be related to the commercial fishing industry as opposed to a charter --

Q I see, but within that limitation it could enhance at least commercial fishing access?

A We do have some issues regarding the Coast Guard and Harbor Patrol and whether the access is available and that, but that certainly is a possibility that it could increase.

Q And if, as a net result of adding an aquatic filter barrier with docking space, if it included docking space available to at least commercial fishermen associated with the Embarcadero, would that have the potential of contributing to the equation in the greater than

normal benefits?

A Yes, it certainly would.

HEARING OFFICER FAY: All right, thank you. I have nothing further.

MS. CHURNEY: I have a followup question.

HEARING OFFICER FAY: We had no redirect.

MR. ELIE: I had no redirect, yeah. I'm not sure what the question --

HEARING OFFICER FAY: I know we've been pretty flexible in that, but I don't think we follow up to the Committee's questions.

Thank you for your testimony, Mr. Schultz, --

MS. CHURNEY: Well, excuse me. You've opened up a new area here and I think we are entitled to follow up with questions. You've made an assumption with respect to the aquatic filter, and I think in fairness we should be allowed to ask our question with respect to assumptions with respect to dry cooling.

HEARING OFFICER FAY: Is your question limited to the dock, alone, in terms of land use?

MS. CHURNEY: Yes, it would be --

HEARING OFFICER FAY: Well, I'll allow that.

MS. CHURNEY: -- similar to your question.

RECROSS-EXAMINATION

BY MS. CHURNEY:

Q Mr. Schultz, if you were to assume that dry cooling would be adopted in this case, which would free up the space currently occupied by the intake structure, because it would no longer be necessary, allowing that space to be used for potential docking of commercial fishing vessels, would that be consistent with the City's policy to preserve a fishing village atmosphere?

A Yes. And the same token with the AFB that, yes, definitely. If that area was opened up to public access of fishing-related ancillary uses it would definitely be a benefit to the City.

MS. CHURNEY: Thank you. No further questions.

HEARING OFFICER FAY: Okay, thank you. Anything further from the City? All right, thank you for your testimony.

That concludes our taking of testimony on land use. Are there any members of the public

who would like to make a comment to the Committee regarding land use questions?

I see no indication. Ms. Mendonca, have you heard from anybody? All right. Apparently there's no request for public comment.

So, I think without any further delay we'll get started on soil and water. Okay, the Chairman would like a brief break. Let's return in five minutes, please.

(Brief recess.)

HEARING OFFICER FAY: After discussing this with the parties the suggestion was made that if staff were to summarize ways in which the staff can agree with the recommendations that Duke has made to changes in the FSA conditions that might speed things along.

So, I'll ask Ms. Holmes to summarize areas of agreement, if you can, and then we'll move to the applicant's presentation.

MS. HOLMES: I'm sorry, I misunderstood what you were referring to earlier. Our witnesses are prepared to go through the changes during their direct testimony.

I had understood the request to be that either Duke was going to go through the changes in

their direct and then we would respond to them; or that we would do our direct first.

So I think that each person -- there's five witnesses on the panel. And I think just about all the changes involve a different person. I think it would be easier at this point, particularly given some discussions we had with the City this morning on one of the conditions, to simply go through the changes on direct.

I will state, however, that with respect to soil and water, I believe it's now 11, which has to do with the section 10 permit for the bridge. Staff does agree with Duke's comments, and agrees that it can be dropped.

HEARING OFFICER FAY: Okay, --

MS. HOLMES: With respect to the others, there's going to be some discussion. So I think it might be better to --

HEARING OFFICER FAY: Let's go off the record.

(Off the record.)

HEARING OFFICER FAY: We're going to proceed then with applicant's presentation on soil and water resources. Mr. Ellison.

MR. ELLISON: Okay. Mr. Fay, could I

have marked for identification the applicant's prefiled soil and water resources testimony.

HEARING OFFICER FAY: I believe that was -- was that not identified on your draft exhibit list?

MR. ELLISON: No, the group two testimony was not. We've been marking them by individual topics as we go through, so --

HEARING OFFICER FAY: Okay.

MR. ELLISON: -- next in order would be.

HEARING OFFICER FAY: If you give us the title of that?

MS. HOLMES: I believe --

MR. ELLISON: Somebody marked it --

MS. HOLMES: Excuse me, I believe that it was marked exhibit 177 yesterday, because we referred to it when we asked the questions of Mr. Willey about permit limitations.

MR. ELLISON: That's correct.

HEARING OFFICER FAY: Yes.

MR. ELLISON: Thank you, counsel. That's correct; that's exhibit 177.

HEARING OFFICER FAY: Okay.

MR. ELLISON: Okay, at this time the applicant would call a panel of witnesses on soil

and water resources. The lead witness is Mr. Robert Mason; supporting witnesses are Dr. Terry Huffman, Mr. Brian Waters and Mr. John Dentler.

At least some of these witnesses need to be sworn.

HEARING OFFICER FAY: Please swear the witnesses. Why don't we just swear this panel.

Whereupon,

ROBERT MASON, TERRY HUFFMAN, JOHN DENTLER and BRIAN WATERS

were called as witnesses herein, and after first having been duly sworn, were examined and testified as follows:

DIRECT EXAMINATION

BY MR. ELLISON:

Q Beginning with Mr. Mason as lead witness, can I ask each of the panel members to state and spell your name for the record, please.

MR. MASON: Robert Mason, M-a-s-o-n.

DR. HUFFMAN: Terry Huffman, H-u-f-f-m-a-n.

MR. DENTLER: John Dentler, D-e-n-t-l-e-r.

MR. WATERS: Brian Waters, B-r-i-a-n W-a-t-e-r-s.

MR. ELLISON: Mr. Mason, do you have a copy of exhibit 177 before you?

MR. MASON: Yes, I do.

MR. ELLISON: And does that exhibit include the qualifications of the panel members?

MR. MASON: Yes, it does.

MR. ELLISON: Beginning with yourself, can I ask each of the panel members to briefly summarize your qualifications.

MR. MASON: Yes, my name is Robert Mason. I'm a Vice President for Planning and Development of TRC. We were involved with the preparation of the application for certification. I have 22 years experience in the management and the project direction of the preparation of environmental impact reports, environmental impact statements and applications for certification for industrial projects including combined cycle facilities; in evaluating multidisciplinary activities including soil and water issues.

I have a bachelors and masters in urban regional planning from USC.

DR. HUFFMAN: Again, my name is Terry Huffman. I have over 20 years experience dealing with environmental permitting issues. My role in

this particular venue is a consultant to Duke related to the permitting process for terrestrial biology issues.

I manage a team of consultants that have prepared various information related to terrestrial biology impacts.

My degrees include bachelor of science in education; a masters of science and a PhD, all in the field of botany and plant ecology.

MR. DENTLER: John Dentler, Vice President with Turnstone Environmental. Hold a bachelors degree in wildlife and fisheries; an MS in ecology; and a JD emphasizing natural resource and environmental issues.

Over 20 years experience at the local, state and federal levels in environmental and natural resource issues and permitting. Participated in a number of FEMA studies and flood plane permitting issues and at the local level.

And with respect to this particular venue, I have worked on FEMA and local flood plane issues.

MR. WATERS: I'm Brian Waters. I'm a Senior Environmental Scientist and Project Manager with Duke Engineering and Services; it's an

engineering and environmental consulting arm of Duke Energy family of companies.

I have over 30 years of experience. I have a bachelors and masters degrees in fisheries biology and some additional graduate work in biological oceanography from Stanford University.

In my 30-plus years of professional experience I've worked on a very large number of energy and water resource related projects, mostly in California. Some in other parts of the United States.

I've worked on various aspects, particularly the marine biology and water use aspects of the AFC and other documents on this project.

MR. ELLISON: Thank you. Mr. Mason, do you have any additions, corrections or clarifications to this testimony?

MR. MASON: Yes, I do.

MR. ELLISON: Would you describe them, please?

MR. MASON: On page 4, down near the bottom, exhibit 169, that should be identified as exhibit 37.

On page 5, there are two exhibits 151

identified. Seven items down exhibit 151 should be 170. The exhibit itself is draft stormwater pollution prevention plan for the construction of Morro Bay Power Plant Modernization.

On page 6, the last exhibit referenced 161; the docket date was January 7th rather than January 4th.

On page 8 we have some minor correction refinement to some of the numbers under the existing permit or berms discussion. Top full paragraph on page 8, fifth line down. At the end of that line there's a phrase that reads: range from 17.8 to 20.3 feet. That should read: range from 17.7 to 20.2 feet.

Further down in that same paragraph, eighth line down, or third from the bottom of that paragraph, still the paragraph regarding existing perimeter berms, there's a phrase: ranges from plus 23.3 to 24.2 feet. That should read: range from plus 23.0 to 23.9 feet.

On page 10, second paragraph under the heading perimeter berms. These are, in fact, the same changes. Second to last line of the paragraph there's a phrase: are expected to be plus 17.8 to plus 20.3 feet. Again, that should

be: expected to be plus 17.7 to plus 20.2 feet.

Further on in that sentence: and 23.3 to 24.2 feet. That needs to be: and 23.0 to 23.9 feet.

On page 11, the next set of changes have to do with some refinements and corrections based upon some recalculation of flow rates, minor refinements.

Page 11, paragraph under cooling water withdrawal, about halfway or a third of the way down there is a sentence that reads: thus the annual weighted maximum daily use of water, and it continues on and ends with: is no more than 287,000 gallons (413 MDG). That should read: 285,000 gallons (410 MDG).

Further down in that same paragraph there's a sentence that reads: assuming that the proposed modernization plant operated at an annual average of 80 percent of its capacity the average water use would be 230,000 gpm (331 MDG). Those numbers should be 228,000 gpm (328 MDG).

The very next sentence begins with: this figure 331 mgd; that should be 328.

On page 12 the paragraph regarding thermal plume configuration, fifth line down

currently reads: the existing heat loads for the thermal plume are in the range. That should read: the corresponding, deleting existing, heat load for the thermal plumes were, deleting the word are, replacing with were, in the range of.

And then further on in the same sentence there's a phrase which beings: which are higher than the projected. Delete the words which are.

On page 19 under the paragraph water supply, cooling water withdraw, very first paragraph, third line there is a phrase that says: plant be considered will utilize. That should be changed to: plant be considered to, deleting the word will.

Second paragraph still on page 19 under cooling water withdrawal, the last line of that sentence indicates: down to 287,000 gallons (410 MDG). That needs to be: 285,000 gpm and 410 rather than the 413.

On page 20, the first paragraph continuing from the previous page, fifth line: fully available online is 230 gpm (331 mgd). That should be 228,000 gpm and 328 mgd.

Third and last line in that same paragraph beginning with: requirement management.

It should be: required maintenance, I'm sorry, required maintenance. Change requirement to required.

Next paragraph, third line, water use reduction of 24 percent based upon the refined numbers. 24 percent should be 25 percent.

Next line, again the 230 gpm should be 228 gpm. And the 331 mgd should be 328.

Second to last line of that paragraph water use reduction is 36 percent. Again, based upon the refinement in the numbers that should be 37 percent.

And, again the last line of that paragraph, the 230,000 gpm should be 228,000. And the 331 mgd should be 328.

Same page, 20, second paragraph under wastewater cooling water discharge one minor correction. Second paragraph, fifth line currently says: will use less flow than the existing plant. The difference in the average temperature. Delete the difference in so it would read: will use less flow than the existing plant, the average temperature of.

Page 22 under water resources, first paragraph, there is fifth line down a reference to

the City of Morro Bay wastewater treatment plant outfall. That should read: City of Morro Bay and Cayucas joint wastewater treatment plant outfall.

Sixth line down, same paragraph, near the end it says: a flow rate of approximately 900 gpm. That should be 1.95 mgd.

Next paragraph, second paragraph under water resources, three changes again to include the Cayucas into the water plant. The first sentence: while the City of Morro Bay, add and Cayucas wastewater treatment plant.

Fourth line down the existing City of Morro Bay and add the words and Cayucas wastewater treatment plant. Third to last line, City of Morro Bay, again add and Cayucas water treatment plant.

On page 31, the first bullet, this is in what was soil and water-10, we have some changes that we'll talk about later, but based upon some follow-on discussions with staff there's an additional change that will be made here.

First bullet item, fourth line, currently it reads: analysis can be based on the, it says this. That should be THEIS equations, T-H-E-I-S equation or similar equation. Going to

delete that and have a sentence that will read, or part of a beginning, beginning of a sentence that's going to read: the analysis will be based on a groundwater flow model based on site specific aquifer parameters.

And then it will continue: to predict drawdown at radial distances from the pumping well.

MR. ELIE: Can we have that again?

MR. MASON: Yes. The analysis will be based on a groundwater flow model based on site specific aquifer parameters to predict drawdown at radial distances from the pumping well.

I suppose it would be more correct actually rather than will be, it probably should be shall be.

Final corrections are on page 35, second complete paragraph begins: the most legitimate comparison, fifth line down 287,000 gpm should be 285,000 gpm. This is a rollover of that sentence to the next line, the 413 should be 410.

Down about midway in the paragraph by the modernized MBPP plant is 230, again that should be 228,000. The 331 should be 328.

About three quarters of the way down,

same paragraph, there's an underlined phrase, average daily cooling water use reduction of 24 percent. That should be 25 percent.

The next line below that down to 230 gpm, that should be 228,000 gpm. And the 331 mgd should be 328.

Those are our changes and corrections.

MR. ELLISON: Thank you, Mr. Mason. With those changes are the facts contained in this testimony true to the best of your knowledge?

MR. MASON: Yes, they are.

MR. ELLISON: And do the opinions represent the best professional judgment of yourself and the panel?

MR. MASON: Yes, they do.

MR. ELLISON: And do you and the other members of the panel adopt this as your testimony in this proceeding?

MR. MASON: Yes, we do.

MR. ELLISON: Could you summarize how the panel went about analyzing the soil and water resources issues pertinent to this project.

MR. MASON: In conducting the analysis we identified the existing baseline conditions for the various topics related to soil and water

resources including onsite soils, surface water flow. That analysis included the 100 year flood plane and the existing berms around the tank farm; water usage for cooling water and makeup water, and the cooling water discharge.

The baseline condition includes the use of the site for over 40 years as an existing power plant. And as directed by the Committee, the baseline for cooling water usage and discharge was defined as the most recent five years.

Using the baseline as a starting position we then evaluated the components of the proposed modernization project as they relate to soil and water resources during the construction and demolition phase and the operation of the modernization project.

For the construction and demolition phase we analyzed the potential for soil erosion and sedimentation and included appropriate best management practices as part of the draft stormwater pollution prevention plans that had been submitted as part of the proceedings.

We also then analyzed each of the components of the project, including the transmission interconnection to the existing Morro

Bay switchyard, onsite roads, the construction of the new bike and pedestrian pathways, onsite construction parking and construction laydown areas, the offsite construction laydown area at Camp San Luis Obispo, the offsite construction and parking area at Quintana Road.

We evaluated the onsite construction of the new natural gas pipeline. And a clarification on this item, or maybe just an amplification. Two methods for construction of the pipeline have been analyzed.

In the AFC the proposed or preferred method was for directional boring for the gasline. Based upon discussions with agencies there was a concern over the potential impacts associated with boring. They asked that we evaluate what the impacts would be associated with trenching. And we did that. And we agreed at that point that the trenching would be possible.

Based upon some subsequent discussions with the California Coastal Commission and California Department of Fish and Game that had concerns over trenching, and that their preferred method was in fact directional boring, we have now gone back to the point where we're now of the

opinion, based upon input from agencies, that the directional boring is the preferred method.

The important point about this is that we have analyzed both the impacts associated with boring and trenching.

We also evaluated issues associated with the construction of the bridge over Morro Creek as it relates to soil and water resources. We evaluated the existing perimeter berms as they relate to surface hydrology and flooding issues.

To evaluate the project in relationship to the 100 year flood plane Duke conducted a detailed Morro Creek flood hazard evaluation and a geotechnical investigation of the existing and new perimeter berms.

This analysis determined that the grading plan for the project, including the perimeter berms, will protect the site from the 100 year flood on Morro Creek and Willow Camp Creek. And that the project will not affect the base flood elevation upstream or downstream of the project site.

The geotechnical investigation of the berms determined that they are seismically stable and capable of withstanding the hydrostatic and

hydraulic forces of the 100 year flood.

Regarding cooler water usage, Duke has determined that using any apples to apples comparison of the cooling water usage for the project, that it will be less as compared to the existing plant. Whether or not that is on a maximum peak day or long term sustainable use.

And that's how we conducted our analysis.

MR. ELLISON: Mr. Mason, could you summarize what your conclusions were with respect to each of the areas that you've just described that were analyzed as part of soil and water resources?

MR. MASON: Our conclusions, based upon CEQA analysis, was that we determined that the project components, the construction and demolition phase and operational phase, that the impacts would be less than significant under the guidelines of CEQA.

MR. ELLISON: Did you also reach a conclusion regarding the compliance of the project with all applicable LORS pertinent to soil and water resources?

MR. MASON: Yes, we did. We agree with

CEC Staff that the modernization project will conform with federal state and local laws, ordinances, regulations and standards.

We do have, though, a different interpretation than staff on how the project will demonstrate that conformance. One is with the Federal Emergency Management Agency regulations on the 100 year flood plane. In fact, that is the sole issue that we have a difference of opinion on how we will demonstrate conformance.

MR. ELLISON: Well, did you reach a conclusion regarding whether there was a cumulative significant adverse environmental impact of this project in combination with other foreseeable projects?

MR. MASON: Yes, we did. We determined that the project and the various cumulative offsite projects will not result in a significant impact to soil and water resources.

MR. ELLISON: Have you had an opportunity to review the final staff assessment?

MR. MASON: Yes, I did.

MR. ELLISON: You've already described how your conclusions compared with staff's with respect to laws, ordinances, regulations and

standards. Do you agree with staff's conclusions regarding the significance of impacts?

MR. MASON: Yes, we do.

MR. ELLISON: Have you had an opportunity to review the conditions of certification?

MR. MASON: Yes, we have.

MR. ELLISON: And could you walk us through those conditions and any proposed changes that the panel would propose to them?

MR. MASON: Yes. Beginning with soil and water-1, we are suggesting some minor clarification in timing. Currently the way the soil and water-1 is written, it talks about prior to site mobilization.

Based upon the first part of the project is the demolition of the tanks within the tank farm. The tank farm demolition phase will occur within the existing bermed area. The berms will be in place. There is no discharge from the berms. Any rainwater precipitation that hits within the tank farm bermed area percolates through the existing soils, and there's no discharge stormwater.

In addition, the tank farm demolition

phase, itself, does not include grading. Therefore we recommend that soil and water-1, with the timing for the submission of the stormwater pollution prevention plans be tied to site mobilization for the construction phase of the project. In our testimony we have noted that as a bold underlined change.

In the verification we also, for consistency, identify again that the verification be no later than 60 days prior to the start of site mobilization for the construction phase of the project.

Soil and water-2, which is really building upon soil and water-1, for the same reasons again that stormwater pollution prevention plans we believe should be submitted prior to the site mobilization for the construction phase. So we again have similar changes in soil and water-2 as what we had for soil and water-1 prior to the beginning of any site mobilization for the construction phase of the project.

And I will note that both soil and water-1 and soil and water-2 include site mobilization at the offsite construction staging area at Camp San Luis Obispo and the offsite

construction parking area. And the verification, the same type of changes.

Soil and water-3 we agree with as written. There is one minor correction that we noted. In the verification it currently indicates Central Valley Water Regional Water Quality Control Board. That should read Central Coast Regional Water Quality Control Board.

Soil and water-4, regarding meeting the requirements of the City of Morro Bay development permit, we agree with this permit, though we do want to note that soil and water-4 should not be construed that Duke Energy would have to obtain City approval prior to or the issuance of a development permit from the City.

It's our understanding that is a power that's under the purview of the CEC under their chief building official. We do recommend just some clarity changes. Again, part of that is based upon timing, that the grading permit, itself, or the grading plan, itself, will be developed for the construction phase. There is no grading associated with the tank demolition phase. Therefore, the timing for soil and water-4 should read prior to site mobilization for the

construction phase of the project.

And, again, we would ask for clarification to add the word, the owner shall satisfy the substantive requirements of a grading permit as required by the City of Morro Bay.

We are showing that that would be submitted to the CPM for review and approval, and to the City of Morro Bay for comment.

Soil and water-5, I believe we discussed on the record at the beginning that staff is now in -- CEC Staff is in agreement regarding no need for section 10 permit for the bridge over Morro Creek. We were recommending it be deleted, but I think we're in concurrence with that.

MS. HOLMES: Just one clarification. I had cited the wrong condition of certification when I made my earlier statement. It is soil and water-5 in the applicant's testimony; it's 6 in staff's because of a new condition that we are agreeing be deleted. It relates to the question whether or not a section 10 permit is required.

MR. MASON: Continuing on with the original conditions, soil and water-6. This is very similar to a previous condition waste number 3, that there's been previous testimony on at a

previous hearing.

We're recommending that even though soil and water-6 and waste-3 are not quite identical, but they do have pretty much the same purpose, and that we have recommended some changes to make soil and water-6 consistent with waste-3.

Primarily has to do with the existing relationship between Duke Energy and PG&E as it relates to site remediation. And that a recent designation of the California Department of Toxic Substances Control, as the administering agency for the remediation of the Morro Bay Power Plant.

So the changes that I have in soil and water-6 again are consistent with the process for those changes that were made in waste-3 a number of weeks ago, calling out the DTSC, the administering agency for review and approval, and to the CPM for information.

It spells out the relationship and the timing and the role of DTSC. I won't go through it in detail unless you would like me to. But, again, the intent was to make it consistent with waste-3.

Soil and water-7 really has two parts to it. One related to -- well, soil and water-7

requires that for the onsite Morro Bay wells that flow meters and totalizers be installed. We have two changes that we would like to make.

One, regarding the MTBE contamination we understand the issue surrounding this, and the need or the requirement to go ahead and notify the responsible parties, including the Regional Water Quality Control Board and the City of Morro Bay, prior to any increase in groundwater usage. And we agree we will obviously do that.

But to the extent that the Regional Water Quality Control Board may determine that the MTBE contamination has been certified as fully remediated before we get to the point of withdrawing additional water as part of the modernization project for the construction, that we would want to have the latitude, at least at that point, that allows us to realize that the MTBE issue is no longer an issue.

And again that would be based solely upon the Regional Water Quality Control Board determining that the remediation has been certified as closed.

The other item that we take a look at has to do with the historic use of water in the

area, including that by the operations at the Morro Bay Power Plant and the City, and the current use of the City of state water project.

During the construction phase and the demolition phase for the existing buildings we agree with the requirement to include the flow meters and the totalizers, and to report those on a recurring basis.

However, once the project is online and the construction phase and the demolition phase are accomplished, the amount of water usage that the plant will have will be in the range of 10,000 gallons per day, which is what they have been doing for the last ten-plus years. Which also corresponds with periods when the City was pumping at higher rates.

We don't believe that it is necessary to leave the flow meters and the totalizers on the onsite wells throughout the operational life of this project. And our changes reflect that.

Soil and water-8, we accept as written. Soil and water-9 we accept as written.

Soil and water-10, again has two parts to it. One, dealing with the issue associated with MTBE; and the other is over the potential

influence that the Morro Bay site wells may have on nearby City wells.

Similar with previous discussion on soil and water-7, we would just like to add one clarification to soil and water-10, that again, should the Regional Water Quality Control Board determine that the MTBE remediation program certify is closed, we're at least wanting to acknowledge that that aspect of this condition becomes moot.

Regarding the requirement to conduct a pump test prior to withdraw of water for the project, it's probably a relatively minor issue, but within soil and water-10, as written, it talks about that pump test should use City of Morro Bay pumping rate of 1000 acrefeet per year.

At least based upon the information that we have from the public available documents, it appears to us that the maximum pumping rate for the City of Morro Bay, and this occurred, I believe, back in 1970, was 730 acrefeet per year.

And that again, based upon information that we see in the public record, that prior to the City connecting to the state water project, that their pumping rate was somewhere in the range

of 500 acrefeet per year.

So we do have a question about where the 1000 acrefeet per year came from, and we would suggest that 730 acrefeet as the parameter for the pump test would be more appropriate.

In the written testimony we had also made changes to direct and to focus the soil and water-10 onto interference or influence on the City wells that could be directly attributed to the project's pumping rate. And that's why during the correction phase, based upon discussions with staff, that we added in the new concept that we will conduct a groundwater flow model based on site specific parameters to predict the drawdown at radial distances from the pumping well.

And, again, the concept we are looking at here is that if there is influence or interference on the City wells that can be directly attributed to Duke's pumping rate, then Duke will, in fact, have a contingency plan to either reduce its amount of drawdown or to provide an alternative source of water for the City.

But we do want to have the ability to have that directly attributed to the Duke pumping rate, and not any pumping that may be occurring,

including that of the City.

Soil and water-11, we believe, should be stricken in its entirety. We believe that there is confusion on the part of staff regarding its interpretation of the federal regulations regarding the 100 year flood plane, and when a conditional letter of map revision is required, we provide some rationale for that in our testimony.

But we do not see that this project requires that conditional letter of map revision or the concurrence with that by FEMA, so we recommend that soil and water-11 be stricken in its entirety.

Soil and water-12 we agree with as written. And that ends the discussion on conditions as in the FSA.

MR. ELLISON: Mr. Mason, have you had opportunity to review the revision to the staff FSA that was filed last week?

MR. MASON: Yes, I have.

MR. ELLISON: And that revision includes a -- proposed condition that would be number 5, and would renumber all of the subsequent conditions that you've been referring to, is that correct?

MR. MASON: That's correct.

MR. ELLISON: So just, first of all, to clarify the record, all of the prior discussion, the numbers of the conditions were as in the original FSA and not as they were renumbered by the revision, correct?

MR. MASON: That's correct.

MR. ELLISON: Have you had an opportunity to review the new proposed condition 5?

MR. MASON: Yes, I have.

MR. ELLISON: And is it acceptable?

MR. MASON: Yes, it is.

MR. ELLISON: Okay. By way of rebuttal I'd like you to refer to the City of Morro Bay's testimony, the testimony of Jon Rohrer. I hope I'm pronouncing that correctly.

And I believe we need this exhibit identified -- marked for identification.

MR. ELIE: It's marked as 174.

MR. ELLISON: Okay, thank you.

MR. ELIE: And you said it right.

MR. ELLISON: Only by virtue of having been with a lawfirm of the same name in a former life.

BY MR. ELLISON:

Q Okay, Mr. Mason, first of all can I refer you to page 3 of 5, the first full paragraph beginning: this potential impact could be mitigated. Do you see that?

MR. MASON: Yes, I do.

MR. ELLISON: What is your response to that paragraph?

MR. MASON: Are we talking about the reference to the desalination wells, that paragraph?

MR. ELLISON: Yes.

MR. MASON: Yes, the paragraph that begins: the potential impact, and specific reference to soil and water-6 and waste-3.

In evaluating the request in this paragraph against soil and water-6 we view the soil and water-6 as written is broadly worded to regard any groundwater contamination, therefore -- and that this is under the auspices of the DTSC, and we don't see any specific reason to call out the protection of any specific wells, it would be any groundwater resource, as written, under soil and water-6.

So we don't see any need for that

clarification.

MR. ELLISON: Further down the page in the middle of the page is a paragraph beginning: One proposed minor modification. Do you see that?

MR. MASON: Yes, I do.

MR. ELLISON: What is your response to that first sentence suggesting that the City should have review and comment authority for the plan described there?

MR. MASON: In looking at soil and water-10, the City is included as that the pump test results analysis and contingency plans will be submitted to the CPM for review and approval, and to the City of Morro Bay for comment, we agree with that concept.

I don't -- and since, based upon that, I believe what is being asked for in this paragraph is already included.

MR. ELLISON: Going to the bottom of page 3, the very last sentence beginning: this portion of the COCs should acknowledge that the MBPPP has more flexibility -- and then continuing on the top of the next page -- to obtain alternate sources to offset its own groundwater extractions as the water required for the MBPPP is primarily

nonpotable.

Do you see that sentence?

MR. MASON: Yes, I do.

MR. ELLISON: Is it true that the well water required for the Morro Bay Power Plant is used for nonpotable uses?

MR. MASON: No, that's not correct.

MR. ELLISON: Could you describe what the potable uses of that water would be?

MR. MASON: The potable use include sanitary facilities within the buildings, themselves. It is also used for various other systems within the power plant and will continue to be.

MR. ELLISON: Further down in the paragraph that continues on the top of page 4, is a proposed rewording of condition of certification 10, do you see that?

MR. MASON: Are we still on page 4, the top paragraph?

MR. ELLISON: That's correct. The sentence, next to last sentence of the paragraph states: this portion of soil and water COC 10 could be reworded to state, and then there is a quote with a proposed rewording of that condition.

Do you see that?

MR. MASON: Yes, I do now.

MR. ELLISON: What is your response to that proposed change to condition 10?

MR. MASON: In reading that, what it is doing is eliminating the option that's included in soil and water-10 now for Duke to either reduce its groundwater use or to provide an alternative water source to the City.

We wish to retain that option and leave that at the discretion of Duke whether or not to reduce the groundwater pumping or to provide the alternate source of water to the City.

So we would disagree with that change.

MR. ELLISON: For clarity, the option that you believe the rewording would exclude is the option to provide an alternative water sources, is that correct?

MR. MASON: That's correct.

MR. ELLISON: And then lastly the very last sentence in that paragraph states: in addition, the five feet and two feet trigger levels should be evaluated as part of the analysis process. Do you see that?

MR. MASON: Yes, I do.

MR. ELLISON: What is your response to that proposal?

MR. MASON: In evaluating soil and water-10 as currently written with the five-foot and the two-foot trigger levels we believe that those are appropriate trigger levels for this condition. And there's no need to evaluate that trigger level.

MR. ELLISON: And would the analysis that is proposed as part of the conditions of certification provide any information relevant to those trigger levels?

MR. MASON: No, it would not.

MR. ELLISON: Okay, turning to the testimony submitted by CAPE, the testimony of Dr. Wagner, my questions concerning this testimony are going to go to the question of the relative water use of the existing plant and the new plant. And I believe that Mr. Waters is the appropriate member of the panel to discuss that issue.

BY MR. ELLISON:

Q Mr. Waters, do you have Dr. Wagner's testimony before you?

MR. WATERS: Yes, I do.

MR. ELLISON: Is there a need to

identify --

HEARING OFFICER FAY: That, on the list, has been identified as exhibit 175.

MR. ELLISON: On the first of the two pages of that testimony, although my first page is numbered page 2, and the second page is numbered page 3, so on page 2, but the first page, there is a summary of the testimony. Do you see that, Mr. Waters?

MR. WATERS: Yes, I do.

MR. ELLISON: The first sentence of the summary states: CAPE agrees with staff's assessment that the project, as proposed, would use more cooling water than the actual cooling water volume used by the existing power plant based on the data from the last 15 years. Do you see that?

MR. WATERS: Yes, I do.

MR. ELLISON: Do you agree that the proposed project will use more cooling water than the actual cooling water volume used by the existing plant?

MR. WATERS: No, I do not.

MR. ELLISON: Your testimony contains numbers for both the existing plant and the future

use of the proposed plant, does it not?

MR. WATERS: That's correct.

MR. ELLISON: As a rebuttal exhibit do you have a chart showing, or a bar graph showing the numbers that are in your testimony?

MR. WATERS: Yes, I have prepared such a chart.

MR. ELLISON: Okay. Can we distribute that and have it identified as a rebuttal exhibit? I do want to emphasize, given the discussion that we had about rebuttal exhibits yesterday under air quality, that this is to facilitate the understanding of the Committee's -- the Committee's understanding of the testimony that has previously been filed.

All of the numbers on this bar graph represent numbers that are in the prefiled testimony.

MR. NAFICY: Excuse me, I have a question which may be an objection. I thought we were supposed to have all exhibits prefiled at this point.

HEARING OFFICER FAY: Well, perhaps you missed our discussion yesterday, Mr. Naficy. Your client filed many hundreds of pages at the moment

of offering the testimony, and it was not information that had been prefiled.

Applicant is representing that this is a graphic depiction of information that has already been prefiled, is that correct, Mr. Ellison?

MR. ELLISON: That is correct. And I must say for CAPE to make that objection after what happened yesterday is remarkable, but we'll move on.

MS. HOLMES: Can I ask just a brief question of clarification on the numbers. I believe, based on the discussion this morning, that, in fact, the last column was changed this morning, but this is -- that those were the corrections reflected in the testimony.

In other words, all of the other numbers, the first one, two, three, four, five, six columns contain numbers that we've all seen before, but my understanding is that that last column is numbers that were reduced slightly this morning, and so we saw them for the first time during the corrections of Mr. Mason, is that correct?

MR. ELLISON: No, it's actually not correct because the 410 number represents a very

slight correction from 413 that was made this morning.

MS. HOLMES: Thank you.

MR. ELLISON: And the 328 number represents a very slight correction from 331 that was made this morning.

MS. HOLMES: That's my point, was that those numbers are slightly different as a result of the testimony this morning.

MR. ELLISON: They were very slightly corrected, and in a moment I will ask Mr. Waters to explain that correction. But I think you can see that the differences are so slight that I doubt that there's a problem with that, particularly in light of what happened yesterday.

MR. CHIA: Excuse me, Mr. Ellison.

MR. ELLISON: Yes.

MR. CHIA: I can't seem to hear Brian Waters for some reason.

MR. ELLISON: The reason is he's not speaking.

(Laughter.)

MR. ELLISON: Brian --

MR. CHIA: Thank you for that. When he was speaking I failed to hear him satisfactorily.

MR. ELLISON: For the purpose of a test, Mr. Waters, do you have a chart before you?

MR. WATERS: Yes, I do.

MR. ELLISON: Can you hear that, Mr. Chia?

MR. CHIA: Now I can, thank you.

MR. ELLISON: Thank you, okay.

Mr. Waters, could you describe the bar graph which you have displayed and that you have -- well, first of all, can I have this exhibit identified?

HEARING OFFICER FAY: The exhibit showing the bar graph, entitled Morro Bay Power Plant flow comparisons (mgd) will be exhibit 186.

MR. ELLISON: Okay, Mr. Waters, could you walk us through exhibit 186 and both for the purposes of the transcript, as well as for the purposes of the Coastal Commission's representative who is participating by phone, it's important that you not simply just point, but that you describe what you're pointing at and what's visually depicted here.

So, with that caveat, would you walk us through this exhibit, please?

MR. WATERS: Yes, I will. First off,

I'd like to repeat what you said, Chris, that all of these numbers are in the testimony as corrected. They're all documentable, reproducible, and basically I've heard discussion about apples and oranges around here today, basically you could say the maximum side are the apples, and the average side are oranges. And we want to keep all of our comparisons realistic, apples to apples, and oranges to oranges.

The vertical scale is in million gallons per day; that's the preferred metric for NPDES permit limits, and that sort of thing. But flows are commonly expressed in gallons per minute.

So, across the bottom row is the equivalent number of thousands of gallons per minute.

The first column on the left, the 725 mgd is just simply the existing NPDES permit limit for the circulating water flow.

The second bar, the 668, represents the existing pumping capability of the circulating water pumps in place and in operation at the existing power plant, and does not reflect their design flow, but reflects their existing capacity based on pump flow tests.

The future daily column, the 475, is based on the full operation of all eight proposed pumps with capacity of 41,000 and 250,000 gallons per minute that would be called upon during full peak load duck burning operations.

And that represents the number of million gallons per day that would occur under the unlikely circumstances of all three units operating at full peak load simultaneously for 24 hours a day.

The feature weighted which is the 410 is based on an assumption of duct firing occurring no more than 4000 hours per year. And maximum peak baseload -- excuse me, maximum baseload the remaining 4760 hours per year.

So, in comparing apples to apples, we maintain that the true comparison on a maximum basis of what the plant can pass through in terms of water usage would be the 668 gallons per minute of existing pumps, and incidentally, looking at the records just from the year 2001, the records that are on record with the Regional Water Quality Control Board, I see that there were 10 out of the 12 months of 2001 recorded, 667,000 mgd, so there's probably just a little rounding difference

there. And the other two months both showed over -- showed peaks of over 600, as well. So, that's very realistic.

And then the course of the 410, as I said, can be calculated based on the ratio of duct fired and baseload hours. And that represents a 38 percent, it's actually 38.5 percent, but we didn't round up, we rounded down. And so we think that's a realistic comparison.

Going to the average side of the chart, although I mentioned the 518 mgd as a three-year average in my testimony, I won't -- that's basically the years '99, 2000 and 2001 -- I won't focus on that now unless somebody wants to.

The next column, the 437 mgd represents the five years of record of cooling water use, 1997 through 2001, which is our understanding of the Committee's direction for purposes of evaluating baseline conditions.

And the 328, the column on the far right, represents 80 percent of the 410. And we feel that 80 percent is a realistic conservatively high estimate of what future actual usage may be, given the way power plants are dispatched, market conditions, daily cycles in power demand, annual

cycles and availability of power from alternate sources like hydroelectricity, seasonal weather patterns and so forth. We think that even the 328 is high.

But even if it is as high as 328 in the future, the realistic comparison to make on an average basis would be taking the Committee's directed five-year period of 437 mgd down to the 328, and that would represent a 25 percent reduction.

MR. ELLISON: Okay, Mr. Waters, just again for clarity, the left side of the exhibit marked maximum represents a comparison of the existing project to the proposed project on a maximum or sort of peak day basis, is that correct?

MR. WATERS: Yes. The blue bars are the existing and the green bars are the proposed future. And because peak duct firing operations four pumps per unit would be used, the rest of the year only three pumps per unit would be used, there is a distinction between what hypothetically could occur on any single day during the year. And then what the maximum weighted average, and that's that column that's labeled 410 mgd, could

possibly be on an annual basis.

MR. ELLISON: Referring to the 410 number, the weighted average annual one, this is the one that assumes that the plant is duct firing 4000 hours per year?

MR. WATERS: Yes.

MR. ELLISON: And at full baseload operation for the remaining --

MR. WATERS: -- of the year, yes.

MR. ELLISON: Okay. Now, yesterday under air quality we had a discussion about whether there was a permit limit that limits duct firing to 4000 hours per year.

And to summarize that testimony, and we can look at the transcript, what it was that there is not in the permit, itself, a 4000 hours limitation on duct firing. But there are mass emissions limitations that would prevent the plant from operating in a duct fired mode all 8760 hours of the year.

And there was testimony from Mr. Willey that he thought that the maximum amount of duct firing, depending upon various assumptions, could be 4000 or it could be higher, but would not be every hour of the year.

And there was testimony from Mr. Rubenstein that assuming full baseload capacity of the turbines and that you were duct firing at 100 percent capacity, that he had done the calculation and that that was 4000 hours.

With that summary in mind, the assumptions that would increase the ability to duct fire above 4000 based upon a discussion yesterday appeared to be that you would either not be duct firing at 100 percent capacity -- let me just stop with that. That you would not be duct firing at 100 percent capacity is one way that you could increase the number of hours of duct firing.

Let me see if I can shorten this. The other way that was mentioned, assuming you were using common assumptions for, you know, for things like weather, is that you would not be running the turbines in a baseload capacity all of the other hours of the year.

If you were to increase -- the question now is a -- question, all right?

MR. WATERS: Okay.

MR. ELLISON: If you were to increase the hours of duct firing like duct firing at less than full capacity, or alternatively by not

running the turbines for a baseload capacity, would that also have the effect of reducing water use?

MR. WATERS: If I understood the question correctly, yes.

MR. ELLISON: Do you understand the question? Because if you don't, I --

MR. WATERS: -- maybe it would be better to restate it.

MR. ELLISON: The question is if you were to reduce turbine use below baseload capacity, or alternatively if you were to duct fire at less than 100 percent capacity, would that also reduce water use?

MR. WATERS: Yes.

MR. ELLISON: Okay. So for the purposes of the 410 you have assumed that you are maximizing capacity across a year to the maximum feasible extent, and also maximizing water use, is that correct?

MR. WATERS: Yes, that's correct.

MR. ELLISON: Okay. With respect to the other half of the exhibit labeled average, this is your comparison of the long-term sustainable output of the future project compared to the

historic actual operation of the existing project, correct?

MR. WATERS: Yes.

MR. ELLISON: And the numbers that you have for the historic actual operation of the existing project, first of all, is that the most recent data available?

MR. WATERS: Yes, it is. It covers up through the end of the year 2001.

MR. ELLISON: Okay. And, secondly, are these based upon the recorded numbers taken from -- given to and then taken from the Regional Water Quality Control Board?

MR. WATERS: Yes, they are.

MR. ELLISON: Okay. And this morning I was handed a memorandum to the service list from the Regional Water Quality Control Board dated March 11, 2002, subject Duke Energy Morro Bay Power Plant cooling water flow rates.

I guess I would ask that that be identified for the record at this point.

HEARING OFFICER FAY: All right, that will be exhibit 187.

MR. ELLISON: Mr. Waters, have you had an opportunity to review exhibit 187?

MR. WATERS: Yes, I did this morning.

MR. ELLISON: Okay. And are the numbers on your exhibit 186 for historic water use taken from the same data that's reflected in exhibit 187?

MR. WATERS: Yes, precisely the same. The 518 and the 437 could be produced from the data in that letter from the Regional Board.

MR. ELLISON: Okay. Now, you testified with regard to the future average operational, the proposed plant, the 328 number, that that represented the 410 number, the maximum long-term future-rated number.

That that represented 80 percent of that number?

MR. WATERS: Yes.

MR. ELLISON: That's an 80 percent capacity factor --

MR. WATERS: Yes.

MR. ELLISON: -- adjustment, if you will. Staff has asked the question what would the future average be if you maximized duct firing to the 4000 hours, and then had achieved an overall 80 percent capacity factor for the year, but with that maximum duct firing. Do you know that

number?

MR. WATERS: Yes. That question was passed on to me last week, and I went through the calculation. And it would be 334 mgd.

MR. ELLISON: Okay, thank you.

MR. WATERS: So that would raise the 328 to 334.

MR. ELLISON: All right. Now, you made some corrections to the 410 number and the 328 number this morning, specifically the 410 number. In the prefiled testimony it was 414. And the 328 number was 331. Do you recall those corrections?

MR. WATERS: Yes, it was 413 down to 410.

MR. ELLISON: Pardon me.

MR. WATERS: And 331 to 328.

MR. ELLISON: Can you explain basically why those corrections were made?

MR. WATERS: Yes. In going through the process of answering the question about the duct firing that could result in the 328 being as high as 334, last week, I discovered that the original 413 had been calculated based on the average daily flow during an 8400 only during the days that would accumulate up to 8400 hours of operation,

rather than the 8760 hours that are actually in a year.

In other words, it would be 4000 hours of full duct firing, pumping, and 4400 hours of full baseload pumping, and then whatever the average would be on that. You get a daily average of 413.

But when you add the additional 360 days (sic) not included in the 8400 hours, and operating at baseload, maximum baseload, it reduces the 413 to 410.

MR. ELLISON: A moment ago you said when you add the additional 360 days, did you mean 360 hours?

MR. WATERS: Yes, I did, I'm sorry.

MR. ELLISON: Now, with respect to -- let me walk you across this chart one more time. At the 725 number on the left represents a number taken directly from the permit, correct?

MR. WATERS: That's correct.

MR. ELLISON: And you did no calculations or exercised no judgment with respect to that number, correct?

MR. WATERS: That's correct.

MR. ELLISON: The 668 number is the

maximum design pump capacity, correct?

MR. WATERS: That's the maximum present pumping capability based on pump flow tests.

MR. ELLISON: Okay, and that you exercised -- you made no calculations or exercised no judgment with respect to that number, correct?

MR. WATERS: That's correct.

MR. ELLISON: Okay. On the future daily maximum, the 475 number, did you do any calculations or exercise any judgment with respect to that?

MR. WATERS: No. That is simply there will be eight pumps in the new plant, each with a design capacity of 41,000 to 150,000 gpm. It's just simple multiplication.

MR. ELLISON: Okay. And the 410 number, the only calculation you did with respect to that was to factor in the limitation on duct firing that we've been discussing, correct?

MR. WATERS: That's correct.

MR. ELLISON: Okay. The 518 number is taken from recorded Regional Water Quality Control Board data, correct?

MR. WATERS: That's correct.

MR. ELLISON: And you made no

calculations and exercised no judgment with respect to that, correct?

MR. WATERS: No calculations other than taking the three-year totals, and dividing by three.

MR. ELLISON: Okay.

MR. WATERS: I mean it's a simple average.

MR. ELLISON: All right. And that is also true with respect to your five-year average number of 437, correct?

MR. WATERS: That's correct.

MR. ELLISON: Okay. So the only number on this exhibit in which you've exercised any judgment is the 328 number, correct? And the judgment is that the plant would operate at an 80 percent capacity factor?

MR. WATERS: It's similar to that, but it's actually more simply just taking 80 percent of the 410.

MR. ELLISON: But that was based on your judgment that the plant would likely operate no more than --

MR. WATERS: That would be a conservatively high estimate, yes.

MR. ELLISON: Okay. I'd now like to refer you to the final staff assessment, and to table 3, which appears at page 425.

Do you have that table before you?

MR. WATERS: Yes, I do.

HEARING OFFICER FAY: This is a portion of exhibit 143, the originally filed soil and water resources section.

MR. ELLISON: That's correct, it's at page 425; it's soil and water resources table 3 entitled average annual wastewater discharge.

MR. WATERS: I have an additional copy if we'd like to put one on the screen while we're discussing it.

MR. ELLISON: That's fine, why don't you do that for the convenience of the audience.

(Pause.)

MR. ELLISON: The first row of this table, other than the titles, the one labeled circulating water, is it your understanding that that reflects the cooling water that we've been discussing here?

MR. WATERS: Yes. First, could I ask that the projected version be dropped a little bit so we can see the title.

And then if you could repeat the question?

MR. ELLISON: The question is the first row below the titles of the columns, the one that's labeled circulating water, represents the cooling water that we've been discussing here, correct?

MR. WATERS: Yes.

MR. ELLISON: And as you read the table, the first column, other than the titles, the one that's labeled units 1 through 4, actual flow, 1000 gallons per day (gpm) represents the existing plant average annual circulating water flow, correct?

MR. WATERS: Yes.

MR. ELLISON: And that number that appears there, the 404,400 based upon footnote A is based upon the Regional Water Quality Control Board data for the last 15 years, correct?

MR. WATERS: That is correct, and I believe that was as of the end of September 30th last year.

MR. ELLISON: Okay, whereas your numbers on your exhibit included the last three months of last year up to the end of all of 2001?

MR. WATERS: That's correct.

MR. ELLISON: Okay. Now, this table is labeled average annual wastewater discharge, do you see that?

MR. WATERS: Yes, I do.

MR. ELLISON: The column new Morro Bay Power Plant permitted flow, 1000 gallons per day (gpm) and there appears the number 475,000. That number, 475,000, corresponds to the 475 on exhibit 186 that's labeled future daily under the maximum side of the table, correct?

MR. WATERS: That's correct.

MR. ELLISON: Is it your understanding that the 475,000 number shown here is an average annual number for the new Morro Bay Power Plant?

MR. WATERS: I believe that is what the table was trying to project, but that is not accurate.

MR. ELLISON: That is not an accurate number for the average annual use by the new Morro Bay Power Plant, is it?

MR. WATERS: It is not.

MR. ELLISON: That is a number that represents the maximum future capacity on a single day, correct?

MR. WATERS: Yes, but it could not occur every day of the year.

MR. ELLISON: So this number does not reflect the limitation on duct firing, correct?

MR. WATERS: It does not.

MR. ELLISON: And it does not reflect any down time for maintenance, correct?

MR. WATERS: That's correct.

MR. ELLISON: And it does not reflect any down time because of market conditions or dispatch, correct?

MR. WATERS: That's correct.

MR. ELLISON: Okay. In your opinion, is it physically or legally possible for the plant to operate at this cooling water flow for a sustained period of time, or an annual period?

MR. WATERS: No.

MR. CHIA: I'm sorry, Mr. Ellison, now I cannot hear Brian again.

MR. ELLISON: Brian, can you speak up, please, and see if you can be heard?

MR. WATERS: Testing, testing.

MR. ELLISON: Can you hear him?

MR. CHIA: No, I did not hear that.

MR. ELLISON: Okay, why don't we get the

other microphone.

MR. NAFICY: While we get the other microphone can I object to the question as compound. I'm not sure if he's testifying if it's legally impossible, or physically impossible. So could you parse that out?

MR. ELLISON: Well, the question was either, but I'd be happy to parse it out.

First of all, let's do a test here. Can you --

MR. WATERS: Testing, testing.

MR. ELLISON: Mr. Chia, can you hear that?

MR. CHIA: Could you do that again, please, Brian?

MR. WATERS: Testing, testing.

MR. CHIA: Thank you, I can hear him now.

MR. ELLISON: Okay. So let me parse out the question here. In your opinion would it be possible for the Morro Bay Power Plant to operate such that it was consuming 475,000 gallons per day for an entire year and be in compliance with its air quality permit?

MR. WATERS: No.

MR. ELLISON: We did hear, by the way, you were not here, but we heard testimony on this issue from the air quality witnesses yesterday.

And as a question of physical capability, is it your belief that the plant could operate in that capacity for a long-term, sustained operation?

MR. WATERS: If there were no limits that it would violate.

MR. ELLISON: For example, is it physically necessary in order to keep the plant operating on a sustained basis to do maintenance on the plant periodically?

MR. WATERS: Yes, it is.

MR. ELLISON: And if you do maintenance on the plant you would not be able to sustain this level of cooling water use --

MR. WATERS: That is correct.

MR. ELLISON: -- on a long-term basis? Okay, turning back again to the column labeled actual flow units 1 through 4, this does represent a historic average annual number across the last 15 years, correct?

MR. WATERS: Yes.

MR. ELLISON: And turning to your

exhibit 186, if you were to use the last five years, most recent to going back five years for this number, then that number would be slightly higher, it would be 437,000 gallons per minute, right?

MR. WATERS: 437 mgd.

MR. ELLISON: Mgd, I'm sorry.

MR. WATERS: Yes.

MR. ELLISON: Okay, and the corresponding gpm number would be 303,000?

MR. WATERS: Yes.

MR. ELLISON: And referring again to exhibit 186, if you wanted to insert a number for the average annual sustainable operation of the new power plant, that would be your column on the far right, 328, or 228,000 gallon per minute number, correct?

MR. WATERS: That is correct.

MR. ELLISON: Okay. In your opinion, Mr. Waters, is the comparison that was made here in table 3 a fair apples to apples comparison of the historic operation of the existing plant to the average annual operation of the new plant?

MR. WATERS: No, I do not believe it is a fair comparison. It is not apples to apples;

it's a misleading and inappropriate comparison. Although it's -- average annual, it clearly is not average annual. It takes an average from a 15 year period of record and compares it to a hypothetical maximum daily, 356 days a year, which cannot occur.

MR. ELLISON: Okay, thank you, that's all I have. The witness is available for examination.

I would move the admission of exhibit 177 and exhibit 186.

HEARING OFFICER FAY: Any objection? All right, those exhibits are entered in the record at this point.

MR. ELLISON: Now, for the record, Mr. Fay, would you like me to identify the exhibits that are incorporated by reference in exhibit 177?

HEARING OFFICER FAY: Yes, please, would you just go down the list and do so.

MR. ELLISON: Okay, just reading off the numbers, these exhibits are incorporated by reference in exhibit 177. These are exhibits 19, 22, 36, 37, 148, 149, 59, 65, 150, 80, 37, 157, 92, 56, 79, 151, 51, 125, 170, 152, 153, 110, 156, 50, 158, 159, 160 and 161.

HEARING OFFICER FAY: And these are all described within exhibit 177.

MR. ELLISON: And I neglected to mention exhibit 4. So that one is also incorporated by reference.

HEARING OFFICER FAY: All right. Thank you. With that correction, any objection? All right, hearing none, those are moved into evidence.

And the panel is available for cross-examination, Mr. Ellison?

MR. ELLISON: They are.

HEARING OFFICER FAY: Ms. Holmes.

MS. HOLMES: Thank you, just a couple of quick questions.

CROSS-EXAMINATION

BY MS. HOLMES:

Q Good morning, Mr. Waters. Was the only legally binding requirement that you were referring to with respect to limitations those that would be contained in the Air District's permit?

MR. WATERS: Yes, as far as I'm aware.

MS. HOLMES: And do you know what permit level the applicant is requesting for from the

Regional Board in terms of daily flow?

MR. WATERS: No. We have described to the Regional Board the design capacity of the pumps. I don't know whether or not -- I don't think we've actually put in a formal application in indication other than the maximum design capacity of the pumps.

MS. HOLMES: And is that the level which you would seek permission for from the Regional Board?

MR. WATERS: I'm not sure. I think it would probably be more than that because there are other potential waste streams that go into the discharge. And I believe that it's common for permit levels to be set slightly higher than design levels just to account for potential minor changes in actual compared to design.

MS. HOLMES: So based on what you said you'd actually expect a permit level in excess of 475 millions of gallons per day from the Regional Board.

MR. ELLISON: Could I just clarify that the permit level you're referring to is the discharge level?

MS. HOLMES: Yes.

MR. ELLISON: Okay.

MR. WATERS: I wouldn't be surprised to see that, but as far as I know we haven't had any substantive discussions with the Regional Board Staff about that to this point in time.

MS. HOLMES: And have you had any substantive discussions with Regional Board Staff at this time with limitations on the intake?

MR. WATERS: Not any further than discussing the design capabilities of the pumps, as proposed.

MS. HOLMES: Thank you. Those are all my questions.

HEARING OFFICER FAY: Okay, thank you. Does the City have any questions?

MR. ELIE: Yes, thank you. I guess I'll direct these to Mr. Mason, but if you feel someone else on the panel needs to answer, that's fine.

CROSS-EXAMINATION

BY MR. ELIE:

Q First, you had some testimony earlier about the desalination wells, do you recall that testimony?

MR. MASON: Yes, I do.

MR. ELIE: And I believe your testimony

was that you believed it was adequately covered by the DTSC oversight?

MR. MASON: Yeah, I testified that I thought that soil and water-6 was broad enough, yes.

MR. ELIE: Did the AFC evaluate the desalination wells as receptors of any contamination?

MR. MASON: No, it did not.

MR. ELIE: Are you familiar -- strike that. There's discussion, we've had this discussion, I think, before with other witnesses of Duke as to the relationship between PG&E and Duke with respect to the remediation of the tank farm after the tanks are demolished.

That's a private agreement between Duke and PG&E, correct?

MR. MASON: That's my understanding.

MR. ELIE: And as far as you're aware Duke is the applicant and PG&E is not before this Commission, correct?

MR. MASON: That's correct.

MR. ELIE: Are you also familiar with the LORS section of the FSA, specifically page 4-4 which refers to the City's zero tolerance

pollution policy?

MR. MASON: I will have to pull that out and take a look at it.

MR. ELIE: Please. It's page 4-4 of the FSA.

MR. MASON: Oh, of the FSA?

MR. ELIE: Yes.

MR. MASON: I'm sorry.

(Pause.)

MR. MASON: Too many acronyms; I was going all the way back to the AFC.

MR. ELIE: That's exhibit 143.

MR. MASON: I have page 4-4.

MR. ELIE: And do you see the reference to the City of Morro Bay zero pollution policy?

MR. MASON: Yes, I do.

MR. ELIE: And are you familiar with that policy?

MR. MASON: No, I am not.

MR. ELIE: Is there someone on the panel who is?

Well, let me ask my next question. That was just a foundational question, maybe. Is someone on the panel familiar with the City of Morro Bay's nuisance abatement action which led to

the -- was resolved by Shell agreeing to do some cleanup of the MTBE contamination?

MR. MASON: We have followed it indirectly, but there's probably no one on this panel who has direct knowledge.

But go ahead and ask the questions; I may be able to answer, I don't know. I will let you know if I can or not.

MR. ELIE: Fair enough. Some of the changes you've suggested today specifically talking about soil and water-6 and -10, in an attempt to tie the conditions of certification into the Central Coast Regional Water Quality Control Board certifying the MTBE contamination as being fully remediated.

MR. MASON: That's correct.

MR. ELIE: Okay. My question is how do your changes, if at all, address the City of Morro Bay's ability to enforce its zero pollution policy?

MR. MASON: The changes that we are recommending are based upon our understanding the Regional Water Quality Control Board is the lead agency for the MTBE remediation issue.

Therefore, we would expect that the

Regional Board, in making any determination regarding completion or certification of closure on the MTBE issue would be taking a look at local requirements, including the City's ordinance in making that determination.

So we feel that we would be in a position of being able to rely upon the Regional Board's determination about closure under the assumption that they had taken the City's ordinance into consideration.

MR. ELIE: When you say fully remediated and closure, what are you talking about? Is there some sort of document you're referring to in your concept?

MR. MASON: In my concept I'm assuming that at some point the Regional Water Quality Control Board is going to determine that the remediation is complete; that the extraction well system can be removed; and that the monitoring can be stopped.

MR. ELIE: So your proposal, though, does not take into account the possibility that the City, as another responsible agency for enforcing its own laws, might require the responsible party here, Shell, -- to clean up to

further levels beyond what the Regional Board might require?

MR. MASON: That goes beyond my knowledge base at this point in terms of, and I guess that actually starts to get into issues between, again, the Water Board and the City. And I'll leave it at that.

MR. ELIE: Let me see if I can clarify some of your testimony. Are you suggesting that, for example, are you looking for case closure, no further action letter from the Regional Board, or shutting off of the wells, as a starting point?

MR. MASON: Case closure.

MR. ELIE: What, if anything, would be your response if the Regional Board gave case closure, as you phrased it, and the City did not give case closure in connection with soil and water-10?

MR. ELLISON: I'd just ask for a clarification. You are asking the witness to assume that the City has jurisdiction to close or not close the case, is that the assumption you're asking him to make? Or are you asking him to testify as to whether that's true?

MR. ELIE: I'll ask him to assume that.

MR. ELLISON: Okay, because I just want to be clear that he's not in a position to give any legal opinion as to what the City's jurisdiction is, versus --

MR. ELIE: I won't ask him to interpret the government code section that I'm relying on.

MR. ELLISON: Okay.

MR. MASON: The way that soil and water-6 and soil and water-10 are written, since the CEC CPM also has a continuing role in this, it would appear to me that, under that assumption, that the City could let their concerns be known to the CPM who would have the ultimate determination about how this condition would be interpreted.

MR. ELIE: Turning to your proposed changes to soil and water-10, how does Duke propose to quantify the directly attributed pumping by the project?

MR. MASON: Through the basis of the groundwater flow model we would be able to project what our drawdown would be on the City wells. Based upon then, in part, on soil and water-7, that also includes flow meters and totalizers, we would know what Duke is pumping; we would be able to attribute what, based upon the groundwater

modeling flow, what our drawdown would be. So that if there were drawdown in excess of what was predicted by the model, we would ascertain and put forth a position that it is due to someone else's pumping.

MR. ELIE: What's the plus or minus degree of uncertainty in that flow model?

MR. ELLISON: If you understand the question.

MR. MASON: I understand the question and I'll say I don't know.

MR. ELIE: Does anyone on the panel know, or is that your bailiwick?

MR. MASON: There's no other panel member who would know that.

MR. ELIE: You had some discussion in your, I guess it's rebuttal testimony, concerning Mr. Rohrer's testimony in exhibit 174 as to the five-foot and two-foot trigger levels. Do you generally recall that area?

MR. MASON: Yes.

MR. ELIE: How are the five-foot and two-foot trigger levels arrived at?

MR. MASON: That is a question that should be posed to CEC Staff. It was in their

condition.

MR. ELIE: I'll save that for them. Referring you to your earlier testimony concerning flexibility for Duke, under soil and water-10, and the ability to -- well, I guess it was your, for lack of a better word, criticism of Mr. Rohrer's testimony in that area. Do you recall generally that area?

MR. MASON: I remember the discussion. I wouldn't identify it as criticism, but, yes.

MR. ELIE: Okay, fair enough. The flexibility discussion we'll call it that?

MR. MASON: Yes.

MR. ELIE: Okay. Is the Morro Bay Power Plant water used for drinking water? That is the water that Duke will be drawing down that might affect the City's wells?

MR. MASON: I'm not -- I don't know.

MR. ELIE: That wasn't the -- the potable uses you mentioned earlier today, or potable uses, that wasn't one of the things you mentioned, right?

MR. MASON: That's correct.

MR. ELIE: Are you familiar at all with the DHS requirements for drinking water use by the

City?

MR. MASON: No, I'm not.

MR. ELIE: You wouldn't know one way or another whether they're different than the uses the power plant might have for --

MR. MASON: I would not have any knowledge of it.

MR. ELIE: I have no further questions.

CHAIRMAN KEESE: Thank you. CAPE.

MR. NAFICY: Thank you. I think I'm going to address the questions to the panel, but I think it's Mr. Waters who's probably going to know the answer to most of them.

Can we put the exhibit 186 on there for projection, please?

(Pause.)

MR. NAFICY: While we're doing this I can ask some preliminary questions.

CROSS-EXAMINATION

BY MR. NAFICY:

Q Mr. Waters, were you involved in the preparation of the AFC?

MR. WATERS: Could you repeat the question?

MR. NAFICY: Were you involved in the

preparation of the application for the proposed power plant?

MR. WATERS: Yes, I was.

MR. NAFICY: Okay. And were you involved in the calculations of projected water use in that document?

MR. WATERS: In some cases. In section 6.5. There may be other representations in there that I was not involved in.

MR. NAFICY: Very well. Refer you to exhibit 186, the columns under maximum where there's a future daily and future weighted. How did you arrive at the future weighted average from the future maximum, the maximum daily use?

MR. WATERS: It was not -- the future weighted was not derived from the future daily maximum. It was derived by taking a maximum of 4000 hours per year, with all eight pumps operating under peak duct firing load conditions. And then adding the flow that would be used during the remaining 4760 hours per year with three pumps per unit under peak baseload operations.

MR. NAFICY: Okay, so that represents in your estimate the maximum possible use of the proposed plant?

MR. WATERS: As an annual average maximum.

MR. NAFICY: And what were the assumptions that went into then arriving at a future average under the column to the far right?

MR. WATERS: I explained that a little bit earlier, but basically it was just taking 80 percent of the future weighted maximum.

MR. NAFICY: I understand, I'm just wonder if you could just reiterate the actual factors that -- how did you arrive at the 80 percent?

MR. WATERS: I didn't do it individually. It's just through discussions with the project staff members, and based on my 30-plus years of experience around energy facilities. And knowing that due to things such as the energy market, maintenance outages, annual cycles in demand, weather patterns, seasonal availability of hydroelectric power in the daily cycles in demand that the units would not operate. That it's extremely unlikely that the units would operate at a level that would even require as much as 80 percent of the maximum possible water usage.

MR. NAFICY: Are there any documents

that were used in arriving at this calculation of 80 percent of the weighted average?

MR. WATERS: No. There's some professional judgment and, for instance, within the last couple of years the operation of the existing plant, as a merchant plant; and like I said, in ten out of the last 12 months, there were peak days that were, you know, that full operation but the capacity factors are still in the neighborhood of 60 percent. So we think this 80 percent is still a conservatively high estimate of what would happen in the actuality.

MR. NAFICY: You referred to the future energy market, California's future energy market as one of the factors that went into the 80 percent judgment call on your part, is that correct?

MR. WATERS: I just said that the future water usage would be a function of energy market forces, in addition to many others.

MR. NAFICY: Do you have any sources for your predictions for the future energy market in California?

MR. ELLISON: That misstates his testimony. He cited the future energy market as a

factor, but he did not make a prediction, per se, of the future energy market.

MR. NAFICY: I believe he testified that predictions about the energy market were one of the factors that led him to conclude that the 80 percent figure is a reasonable estimate of future use.

MR. ELLISON: But that was one of several factors that he used in exercising his judgment that an 80 percent capacity factor was conservatively high. That, I believe, was his testimony.

But if you are asking the question for a specific prediction of future market conditions, I think that misstates his testimony.

MR. NAFICY: Well, I'm just simply asking if he does have any sources that he referred to for arriving at conclusions about what the California's future energy market would be like.

Did you refer to any documents or other sources for that information?

MR. WATERS: No, other than my reflection on what has happened in the last two years with the existing plant and the existing

market.

MR. NAFICY: Thank you. Do you know if the AFC contains a prediction of future average use of the plant?

MR. WATERS: I haven't looked at that for that aspect for some time. I know that there was an earlier table that utilized a 90 percent factor, if that's what you're getting at.

MR. NAFICY: Well, I was just asking a question, but since you bring up the table, do you know who prepared that table?

MR. ELLISON: Could you give us a specific reference here so that we can follow --

MR. NAFICY: I'm referring to the table he's referring to. He just mentioned a table in the AFC that's had a 90 percent figure, and I'm referring to that table.

MR. WATERS: Okay, I think we should look at it, though, if we're going to address it specifically. I don't even remember for sure exactly where that table was. I just said I remember seeing it.

MR. NAFICY: Well, we may have a reference to it if I can look -- it's reference 7 at the end of table 2-1 of reference 7 in the AFC.

You know what, for the purposes of this discussion -- for these purposes it doesn't really matter. It is a reference to 316B study. But I just wanted to know why is it that there's a difference between your prediction of average use now as compared to the prediction of future average use in the AFC.

MR. WATERS: I wouldn't say that I've changed the prediction, as such. On here, there's, you know, a lot of things have changed. At the time the application was put together there was input provided by a number of people, and a number of conditions and projections have been refined since then.

MR. NAFICY: Could you --

MR. ELLISON: I have to say I am concerned about proceeding with this on the assumption that there is a difference without specifically getting out the AFC and looking at that.

And to be specific, I'm concerned about it because there are numbers, percentage numbers in this proceeding that represent estimates of different things.

For example, there are estimates that

represent what people think the project is capable of producing on a sustained basis. In other words, that only factor out maintenance. Versus those that represent what the plant will operate at given all the factors that Mr. Waters has described.

And I am concerned, one of our biggest concerns on this topic is apples and oranges. And I am concerned that this line of questioning is going that way.

So, if you want to keep going this way, I think we ought to get out the AFC and take the time and trouble to look at it and see what it says.

HEARING OFFICER FAY: If I can interject here, we're told that lunch is ready. And since we do have a question about a document it might be a good time to break and try to find the reference. And then we can --

MR. NAFICY: That sounds reasonable, but I'm now concerned that Mr. Ellison is actually -- Mr. Ellison is actually testifying for the witness. And that sort of went beyond a simple objection.

So, I'd be happy to pull the document

and look at it, but I would object to a continuing explanation and testifying on behalf of --

HEARING OFFICER FAY: Well, I do think we have -- if there is a document that estimates 90 percent availability, then we have to know for what purpose it estimated that.

So, during lunch let's try to find that reference.

We'll take a lunch break now, and reconvene at 12:30. Lunch is available, thanks to Duke, right next door. We're off the record.

(Whereupon, at 11:55 a.m., the hearing was adjourned, to reconvene at 12:30 p.m., this same day.)

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AFTERNOON SESSION

12:29 p.m.

MS. HOLMES: Staff has two procedural issues to raise. The first is that in a filing made on January 24th we had asked that the Committee take official notice of the determination of acute reference exposure levels for airborne toxicants published by the Office of Environmental Health Hazard Assessment. The publication date was March 1999.

As it turned out, staff did not refer to it during its testimony yesterday, however when the Committee was asking questions of Mr. Willey, the document was discussed. And therefore I thought it would be appropriate at this point to renew our request for official notice.

HEARING OFFICER FAY: Okay. And would you like that marked for identification?

MS. HOLMES: I don't know whether or not it's necessary; that's really the Committee's --

HEARING OFFICER FAY: All right, --

MS. HOLMES: -- prerogative.

HEARING OFFICER FAY: -- is there objection to taking official notice of the OEHHA document? I hear none, so we'll take

administrative notice of that.

MS. HOLMES: Secondly, I think it might be a simpler mechanism to similarly take official notice of the data that came in from the Regional Water Quality Control Board this morning. Another option would be to have Mr. Thomas sworn and have him sponsor it. But since it is the official record from a state agency, I think it might be simpler just to take official notice. It's month-by-month data for the past 15 years.

HEARING OFFICER FAY: Is there objection to taking official notice of -- is this exhibit 187?

MS. HOLMES: It is.

HEARING OFFICER FAY: Any objection to taking official notice of that? All right, we will do so at this time.

MS. HOLMES: Thank you.

HEARING OFFICER FAY: Thank you. And now, we will continue with CAPE's cross-examination of Duke's witnesses on soil and water.

MR. NAFICY: Good afternoon, Mr. Waters, members of the Commission. I have now presented you with a chart that was table 2-1, reference to the 316B study which I have now asked to be

identified as exhibit -- what is it, 188 now?

HEARING OFFICER FAY: Yes. Mr. Naficy, would you please give us the source of this, and fully identify it.

MR. NAFICY: Sure. This comes from the revised draft Morro Bay Power Plant Modernization project thermal discharge testimony report that was submitted on April 20, 2001.

HEARING OFFICER FAY: Submitted by the applicant?

MR. NAFICY: Correct.

HEARING OFFICER FAY: Okay, that will be, then table 2-1 as identified will be exhibit 188.

CROSS-EXAMINATION - resumed

BY MR. NAFICY:

Q Mr. Waters, have you had a chance to review this table?

MR. WATERS: Yes, I have.

MR. NAFICY: Have you, before today had you seen this table before?

MR. WATERS: Yes, I have.

MR. NAFICY: Did you prepare this table?

MR. WATERS: Not in its entirety. It was a table that evolved, and I was involved in

it.

MR. NAFICY: Can you -- I refer you to row number one, two, three, four, five, six where there's a reference to average flow rates. Do you see that?

MR. WATERS: Yes, I do.

MR. NAFICY: And do you see where there's under existing boiler units there's a figure of 3900 and 40,000, presumably that's gallons per day. And then 258,000 for the new combined cycle unit.

MR. WATERS: Yes, I do.

MR. NAFICY: The calculation of these two figures, was that done by yourself?

MR. WATERS: I don't recall.

MR. NAFICY: If it wasn't done by yourself can you identify who else might have prepared those numbers?

MR. WATERS: No. I know that it passed me; I very well could have been the one that did it, but like I said, a number of tables involving parameters related to the power plant were generated through the design folks and others, and I'm not sure who might have generated the numbers initially. Or, you know, made that calculation

initially.

MR. NAFICY: Was this chart before it was inserted into the document that it came in, was it approved by yourself or anyone else within Duke?

MR. WATERS: I would say yes.

MR. NAFICY: Oh, was it approved by yourself?

MR. WATERS: I would say -- I mean we don't have any kind of formal sign-off approval of material like this, as such. But I would agree that it was approved by me.

MR. NAFICY: Thank you. Now I want to refer you to footnote 5, where it states that average flow rates the year 2000 average for the existing boiler units, and a conservatively high 90 percent of the weighted maximum flow rate for the combined cycle units.

Do you understand that to mean that the figure of 258,000 gallons per minute represents a 90 percent projected average use for the proposed plant?

MR. WATERS: As stated it says, it represents 90 percent of the weighted maximum flow rate, so, yes.

MR. NAFICY: So is that the same projection as you have done by arriving at an 80 percent future average weighted rate?

MR. WATERS: It is a different representation of essentially the same type of estimate.

MR. NAFICY: And do you know what presumptions or factors went into arriving at the 90 percent figure as a conservative estimate?

MR. WATERS: Not specifically. I think it was a recent product, as you see in this table there's no particular discussion or context. I think the table is entitled -- generating loads, discharge flows, temperatures, heat loading, blah, blah, and I think that the intent of the table at that time was just to set up different ways of looking at how these parameters may be different between the existing plant and the future plant. And that particular 90 percent was selected at the time this table was prepared, without any other context or discussion about it.

MR. NAFICY: But as you sit here today, you can't identify any difference between the factors that you considered in arriving at an 80 percent figure in preparing this exhibit 186, and

the factors that were used to arrive at the 90 percent figure that went into the preparation of this table?

MR. WATERS: Actually, no, I did not say that. I told you what factors I believe are considered in the 80 percent projection that's included in exhibit presented today.

And I think that that represents much more recent thinking about what a reasonable, but still high number, would be.

MR. NAFICY: Well, apart from the fact that it's a more recent figure, what other differences exist in how the figure was arrived at? These two figures, what is -- it's not complicated.

I'm just trying to figure out what accounts for the 10 percent difference between what went into this document April of last year, and the figure you're now proposing as 80 percent, if you know the answer.

MR. WATERS: My only answer is that was then and this is now.

MR. NAFICY: I see.

MR. WATERS: And it was based on professional judgment of those involved at the

time the different documents were prepared.

MR. NAFICY: Thank you.

MR. CHIA: Excuse me, Mr. Naficy.

MR. NAFICY: I'm sorry?

MR. CHIA: This is Dan Chia. For some reason I'm still having a hard time hearing Mr. Waters.

CHAIRMAN KEESE: Sorry, we went back to the old mike that's sitting in front. We're getting the portable again.

MR. CHIA: Thank you.

MR. WATERS: Sorry about that.

MR. NAFICY: Moving on, there was some discussion of the long-term sustainable use of the new plant. You made some -- on direct you made some predictions about long-term sustainable use, and that's, I believe, was the 80 percent of the future weighted average, is that correct?

MR. WATERS: I don't believe I used the term long-term sustainable use.

MR. NAFICY: I --

MR. WATERS: I may have, but I think I clarified where that 80 percent came from.

MR. NAFICY: I understand. I was just referring back to a question I believe those were

Mr. Ellison's comments.

MR. WATERS: Okay.

MR. NAFICY: You also expressed that you have some familiarity with predictions of California's future energy market, is that --

MR. WATERS: No, I did not say that.

MR. NAFICY: Well, if you used your knowledge of future market to arrive at the 80 percent figure, doesn't that presume that you have some knowledge of those --

MR. WATERS: I didn't say that I used my knowledge of future market. I said that the 80 percent includes consideration of many factors, including energy market forces.

MR. NAFICY: Well, consideration of energy market forces, doesn't that presume some knowledge of what these forces are?

MR. WATERS: Yes. And over 30 years of working at and around power plants, and I know what goes into their dispatching in a general manner.

MR. NAFICY: Okay.

MR. WATERS: I'm not aware of any power plant that has had, any thermal power plant that has had -- that's not connected as a, you know,

cogen or something like that, but has had an average capacity factor as high as 80 percent. They may well exist, but this plant in this location, I think that 80 percent is still conservatively high.

And I would be extremely surprised over the life of the projected plant, if it were ever achieved as an annual average.

MR. NAFICY: Based on your knowledge of the, you know, 30 years of experience with California's energy market, do you have any -- have you looked at the future of the existing plant and at what capacity it might be able to operate in the future market?

MR. WATERS: In the near term I expect that it would probably operate about the same as it has in the most recent three years, as it has operated as a merchant plant.

MR. NAFICY: And what do you mean by near future? What sort of timeframe?

MR. WATERS: I'm not that involved in, you know, potential, you know, life extension projects or whatever for the existing units.

MR. NAFICY: But, for example, are you aware of whether costs of energy generation is

going to be a factor as to how much energy any given plant can sell in California's future energy market?

MR. WATERS: I'm sure it would be.

MR. NAFICY: And do you have any idea of the cost of energy production at the existing plant?

MR. ELLISON: I'm going to object to that question on multiple grounds. First of all, it goes beyond the scope of the direct here. Mr. Waters has testified to soil and water issues.

He has stated that in regard to a capacity factor for the new plant that he has made a general judgment as to what the capacity factor would be, but he has certainly not testified in any way as to market conditions in California in the future with respect to either the existing plant or the new plant.

Everything that he's testified to with regard to the existing plant is historical data based upon the Committee's direction as to what the baseline would be. So this is clearly beyond the scope of his direct.

In addition, the information that is now being asked for is proprietary and confidential.

MR. NAFICY: Well, --

HEARING OFFICER FAY: I'm going to sustain that on the basis that it is beyond the scope of his direct. And I think the Committee can accept the limitations that he has characterized on his estimate, the 80 percent.

MR. NAFICY: Well, that's -- it actually goes beyond the 80 percent. And, also, he's clearly opened the door. His knowledge of California's energy market. Because he's testified that he's based his prediction of 80 percent, at least in part, on considerations of the energy market. It's in the, you know, written testimony; he reiterated it today.

So I can't see how that's an inappropriate area for cross-examination.

HEARING OFFICER FAY: Well, I don't think it's productive for you to go down that avenue since he's mentioned it's just one of many things he's touched on, and indicated that he's not expert in that area.

MR. NAFICY: Well, I respectfully disagree, but I obviously will abide by your ruling.

In terms of the average previous use,

over the last -- you've given us figures from the last three years, and then the past five years.

Do you know how long Duke has owned this power plant?

MR. WATERS: I believe Duke took control in July of 1998; I may be corrected on that.

MR. NAFICY: And so is it fair to say that since July of 1998 Duke has had control over the amount of electricity produced at the plant?

MR. WATERS: As a function of operating within the market of merchant plants in California, yes.

MR. NAFICY: Right, but was there a requirement for Duke to run the plant at the maximum allowable capacity?

MR. WATERS: A regulatory requirement?

MR. NAFICY: Correct.

MR. WATERS: Not that I'm aware of. But that's not my area.

MR. NAFICY: And would it be fair then, getting back to water, to assume then that Duke has had control over the amount of water that the plant has consumed since 1998?

MR. ELLISON: Let me ask for a clarification here. When you say has had control

over, do you mean control in the sense of ownership as distinct from dispatch?

MR. NAFICY: Well, I don't think Duke owns the water, but --

MR. ELLISON: I'm talking about the power plant. What I'm trying to get at is are you asking whether Duke is, in fact, responsible for the dispatch of this power plant, as opposed to the physical owner.

MR. NAFICY: Yeah, dispatch. I mean has Duke had the ability to control how often and how much to run the plant, and thereby controlling how much water is consumed by the plant?

MR. ELLISON: Well, again, I think this probably goes beyond the scope. I'm not sure where you're going with this. If you know, Mr. Waters.

With that clarification is Duke responsible for the dispatch of the power plant is what I understand your question to be.

MR. NAFICY: Yes.

MR. WATERS: So is there still an outstanding question to me?

MR. NAFICY: Yes.

MR. WATERS: Could you repeat the

question?

MR. NAFICY: Is Duke responsible for the amount of water, that once-through cooling water, that has been used by the plant since 1998?

MR. WATERS: I would say I believe the answer is yes, under the constraints of operating as a merchant plant in California since Duke took ownership.

MR. NAFICY: Now, has there been anything different in the energy market in the past three years as compared to the previous 20 years of the operation of the plant? Is there anything in the conditions of that operation been different?

MR. WATERS: That's not my area of expertise, but I think as citizens of California we're all aware that there have been energy shortages.

MR. NAFICY: And therefore the extra amount of water use that has been -- well, do you agree that water use in the plant has risen dramatically in the last three years?

MR. WATERS: No, I don't.

MR. NAFICY: Are you objecting to the word dramatically?

MR. WATERS: Yes. It's a judgment.

MR. NAFICY: Do you know how the amount of water used by the plant in this last three years compares with say the three years previous to that?

MR. WATERS: Yes. It was greater.

MR. NAFICY: Do you know by what percentage approximately?

MR. WATERS: I'd have to look at figure.

MR. NAFICY: Could you please? Do you have that available? Could you look at the figures and tell me, for the past three years, as compared to the three years previous.

MR. WATERS: So that would be '96, '97 and '98 compared to '99, 2000 and 2001?

MR. NAFICY: Correct. Well, can you tell me approximately by what percentage has the water usage over the three years gone up compared to the previous three years?

MR. WATERS: -- I would say almost twice.

MR. NAFICY: So, because of the energy crisis, so-called, in the past three years the amount of water used over the previous three years has doubled, is that correct?

MR. ELLISON: Your question assumes because of the energy crisis, correct? Are you asking him to attribute this to the energy crisis? Or are --

MR. NAFICY: Well, I --

MR. ELLISON: -- you just asking has the water use gone up?

MR. NAFICY: Well, I thought he attributed it to the energy crisis in the last question.

MR. ELLISON: I do not believe he did.

MR. NAFICY: Okay. Is there any reason other than what's being referred to as the energy crisis to account for the additional water use of the plant in the last three years?

MR. WATERS: Yes. Dr. Wagner, sitting to your left, prepared a report analyzing the same historical record of water use and making projections. And that was docketed last fall.

And Duke Energy responded with a docketed response to that. And in that response Duke looked into the records of what was going on in those lower years, in the mid 1990s, and you happened to pick like the three lowest of the last 15 when you selected those three.

And there were major scheduled and unscheduled repair and maintenance activities involving cracked rotors, installation of NOx controls for air quality purposes, and so those were atypical, I would say.

And if you look at this chart they're atypical because they fall well under the 15-year average.

In addition to that, like I said, since Duke has been operating as a merchant plant, it is dispatching differently than PG&E dispatched it as a regulated utility, because PG&E had other interests, it's my understanding PG&E had other interests related to operation of Diablo Canyon, some constraints on transmission capabilities, and other factors that are outside of my area of expertise, but I understand that, you know, as a regulated utility with control over all the resources, including abundant hydro, trying to keep the -- storage project reservoirs full using Diablo Canyon power, and all that sort of thing, that they did not operate the plant the same way that plants are now operated in the merchant market.

MR. NAFICY: I understand that your

position is that three years from '98 to '96 were unusually low. And one of the first or the first reason you offered for why you believe they were unusually low was these maintenance, you said routine and unscheduled maintenance activities.

Would you say that it's unusual for a power plant that is 50 years old to have some down time for routine or unscheduled maintenance activities?

MR. WATERS: No.

MR. NAFICY: Is it fair to say that the last operation of the plant has been unusually high in the last three years compared to the previous 20?

MR. WATERS: I only have records going back to 1987, but --

MR. NAFICY: Okay, going back to '87 --

MR. WATERS: -- are higher than the average over that period, yes.

MR. NAFICY: Now, in the direct testimony that was proffered by Duke on soil and water, there is some discussion of the so-called CEQA baseline, and there's a statement in there about what that ought to be.

Is that what the CEQA baseline ought to

be in this analysis, is that based on your opinion?

MR. WATERS: It's based on my understanding of the Committee's direction to staff of the Energy Commission of the period of time to use to characterize conditions representing baseline.

MR. NAFICY: I understand, but the testimony that was filed here, is it fair to attribute that statement about CEQA baseline to yourself?

MR. ELLISON: That question's been asked and answered.

MR. NAFICY: I'm sorry, I wasn't --

MR. ELLISON: The answer was that he used that number in the testimony based upon the direction of the Committee to staff.

MR. NAFICY: Well, I'm going to object again, counsel testifying for the witness. That's not in the form of an objection.

MR. ELLISON: I'm objecting that it was asked and answered, and repeating the answer that he just gave you.

HEARING OFFICER FAY: Sustained.

MR. NAFICY: Do you have -- have you,

yourself, ever researched the issue of what is a CEQA baseline in a case like this?

MR. ELLISON: Objection, that calls for a legal conclusion.

MR. NAFICY: It doesn't. It's a simple question. Have you researched a legal -- have you done any legal research as to what the CEQA baseline is in a case like this. The answer is either yes or no.

MR. ELLISON: You're asking this witness whether he has done legal research?

MR. NAFICY: Yes.

HEARING OFFICER FAY: Mr. Naficy, I'm going to have to sustain that. He's not an attorney, and I think it's also irrelevant because the Committee has given direction as to what the baseline would be in this case. We tried to avoid a lot of litigation on this by issuing an order early on that the baseline would be a five-year period.

And we've interpreted that as the most recent five-year period. So, staff will be using five years prior to the time they do their FSA on biology to examine the water intake period.

MR. NAFICY: Well, again, with all due

respect that's a legal issue, and that has to be a legal conclusion. It's not clear that the Commission or a tribunal such as a court of law -- I mean, decision makers don't have discretion as to what the baseline is. That's a strictly legal issue.

And I think it's fair to ask the witness if the witness has done independent legal analysis or is just simply relying on the direction provided by the Committee. That's all I was asking.

HEARING OFFICER FAY: I think that's a fair question. Ask him whether he has independent information he's relying on, or is relying on the directions of the Committee.

MR. NAFICY: Well, that was, in fact, I believe, my question. If he's independently arrived at a conclusion based on his legal research.

MR. ELLISON: Well, let me register another objection here. The point of this is whether he based his use of that baseline on the Committee's direction. That has been asked and answered and he has said yes.

If you are now trying to impeach the

Committee's ruling through this witness, you, yourself, have characterized that as a legal issue. Okay.

So whether this witness has done legal research or not, and what that research is or not, is entirely inappropriate because he's not a lawyer.

And Duke's views of the legal issues will be presented in our brief, and have been presented in briefs prior to that. You're free to brief the issue, as well.

But I have to object, this line of questioning, I think, is entirely inappropriate.

HEARING OFFICER FAY: And we've sustained the objection. What we informed staff, and it goes as well for the other parties, is that they must review this five-year average, historical average, in terms of establishing a baseline for CEQA analysis.

They are free to also provide other information and argue that perhaps it is more appropriate. But that all parties must provide the five-year basis if they're going to provide information on a baseline.

MR. NAFICY: That's fair, and I don't

mean to belabor the point. I thought your ruling was that he can answer it, but I'll move on.

HEARING OFFICER FAY: Please.

MR. NAFICY: I have no further questions at this time on cross, but we would like to offer Dr. Wagner, apart from his direct testimony, also for rebuttal. And since for -- I guess it's surrebuttal -- and since he has to leave at about 3:00 we were wondering if we could combine the surrebuttal and the direct, so that he's free to leave at 3:00.

HEARING OFFICER FAY: Is there any objection to moving to CAPE's testimony on this topic, ahead of the other parties?

MR. ELLISON: Well, if the question is can we move to it immediately, prior to the redirect of our witnesses and the completion of our witnesses, yes, I would object to that.

If the question is as soon as we complete the applicant's testimony could we take CAPE out of order, then I don't have a problem with that.

HEARING OFFICER FAY: Okay, we'd like to accommodate what we just learned is a limitation on Dr. Wagner's time. Any other objection?

Okay. That completes the round of cross-examination. Mr. Ellison, do you have some redirect?

MR. ELLISON: I do, very briefly.

REDIRECT EXAMINATION

BY MR. ELLISON:

Q Mr. Waters, you were asked a number of questions about the capacity factor judgment which you made in developing the 328 number for the future average use of the new power plant.

And you've testified that you've been in the electric power industry for 30 years, correct?

MR. WATERS: That's correct.

MR. ELLISON: And how many power plants have you been associated with during that time?

MR. WATERS: In total, somewhere in the neighborhood of 100.

MR. ELLISON: And of those 100 power plants are you aware of any of them that have achieved greater than an 80 percent capacity factor over any sustained period of time?

MR. WATERS: No. I should clarify that a number of those would have been hydroelectric power plants, not all thermal power plants. But, the answer is still no.

MR. ELLISON: Okay, and certainly of thermal, gas-fired power plants comparable to the Morro Bay facility, are you aware of any that have achieved a capacity factor greater than -- and let me also exclude cogeneration projects. When I say comparable, I mean combined cycle, gas-fired power plants comparable to this one. Are you aware of any that have achieved greater than an 80 percent capacity factor over a sustained period of time?

MR. WATERS: No.

MR. ELLISON: You were also asked some questions about the increase in power plant operation over the last three years. Was there not a legislation, AB-1890, which accomplished a wholesale restructuring of the California electric market approximately five years ago?

MR. WATERS: Yes, I believe it went into effect in 1996.

MR. ELLISON: Okay. And in looking at a change in the power plant's operation would you not agree that the change in ownership, as combined with the restructuring of the California electric market, would account for a significant change in the operation of the power plant?

MR. WATERS: Yes, I would agree.

MR. ELLISON: That's all I have.

HEARING OFFICER FAY: Anything further along this line?

MR. O'BRIEN: Mr. Waters, I have a few questions for you.

EXAMINATION

BY MR. O'BRIEN:

Q Is it a true statement that the proposed facility will be more efficient than the existing facility in terms of the amount of water needed for each megawatt produced, the amount of cooling water needed?

MR. WATERS: Yes, that is true.

MR. O'BRIEN: Okay. And in making exhibit 186, if you look under the average section in the column furthest to the left, three-year average '99 to '01, and the amount is 518 mgd.

Do you have any idea in terms of what capacity factor that represents?

MR. WATERS: I believe it's in the neighborhood of close to 60 percent, but not quite 60.

MR. O'BRIEN: Not quite 60, okay, thank you.

MR. WATERS: I think 2000 and 2001 both

came in very close to 60, but 1999 was less.

MR. O'BRIEN: All right. And let me ask you another question. In terms of the proposed power plant, does the amount of water needed for cooling purposes for each megawatt generated change when duct firing is added?

MR. WATERS: Yes, it does.

MR. O'BRIEN: And can you tell me what that difference is?

MR. WATERS: There's a figure 6.5-20 in the AFC. It was also cited as one of the exhibits. And it shows the relationship of cooling water use with -- excuse me, it's 6.5-19. It shows the relationship of cooling water use to generation.

And I have a copy of it here, just this one copy, if you'd like me to project it. If you'd like --

MR. O'BRIEN: Well, that may not be necessary if you can just answer a question for me. What is the difference in terms of efficiency? Can you give me a percentage difference?

MR. WATERS: If you'll bear with me for a minute, I think I can get that from the table 2-

1 that CAPE recently entered into evidence from
2 the thermal discharge assessment report where it
3 looks at flow related to load.
4 The flow per kilowatt generated, up to
5 maximum baseload, is .24 gallons per minute. The
6 flow per kilowatt generated at maximum peak load
7 with duct firing is .275 gallons per minute.
8 MR. O'BRIEN: Okay. And given that
9 difference, was that factored in when you made
10 your estimate of 328 in terms of a future average?
11 MR. WATERS: Yes. Yes, the actual flow
12 usage that goes into that was factored in.
13 MR. O'BRIEN: Okay, thank you.
14 HEARING OFFICER FAY: Nothing further,
15 then we thank the applicant's panel for its
16 testimony.
17 And now, as per our agreement, we'd like
18 to move to CAPE to accommodate their time
19 constraint for a witness. Mr. Naficy. Will the
20 court reporter please swear the witness. Dr.
21 Wagner, please stand.
22 Whereupon,
23 PETER E. WAGNER
24 was called as a witness herein, and after first
25 having been duly sworn, was examined and testified

as follows:

MR. NAFICY: Thank you. With the Commission's permission we'll begin with the direct testimony, and then move into rebuttal. Would that be appropriate?

HEARING OFFICER FAY: Yes.

MR. NAFICY: Okay.

DIRECT EXAMINATION

BY MR. NAFICY:

Q Dr. Wagner, could you please briefly explain, describe your qualifications and work experience.

A Yes. I have a PhD in physics from the University of California. I have taught electrical engineering and physics and done research in these areas between 1960 and 1999.

For one seven-year period in that time in the '70s, I directed a major research laboratory on the east coast that dealt with estuary research. And in a separate one-year sabbatical I worked for the State of Maryland as an engineer establishing the monitoring program for aquatic terrestrial and air monitoring around power plants.

Q In preparation for your testimony today

which documents did you review?

A Oh, my goodness. I reviewed the 315B, the AFC, all in part; I reviewed the paper referred to earlier as a rebuttal to my cooling water analysis. And probably some other things I can't think of right now.

Q And based on your experience and the documents you've reviewed and calculations you made, did you prepare what's been referred to as exhibit 175?

A Oh, yes, my deposition. Of course.

Q And does the content of your testimony on soil and water resources, exhibit 175, constitute your best professional judgment?

A Yes.

Q Would you briefly summarize what you contend in this testimony?

A Yes, I can say it in one sentence. This deals with the penalty incurred by duct firing on the use of cooling water.

A 16.3 percent increase in power takes a 33 percent increase in cooling water. And I have a chart here I could show if you'd like to see it; or I can describe in words --

MR. NAFICY: This basically contains the

substance of his testimony and may be helpful for people to be able to look at the figure.

DR. WAGNER: There's nothing new in there.

HEARING OFFICER FAY: It's a graphic depiction of the information --

DR. WAGNER: Correct.

HEARING OFFICER FAY: -- in your testimony?

MR. NAFICY: Correct.

HEARING OFFICER FAY: Yes, please put it up.

(Pause.)

DR. WAGNER: The figures here are taken either from the FSA, volume two, or from the AFC, itself. I don't know whether you can read them at that magnification.

It's very simple arithmetic. You simply take the maximum power with duct firing, subtract from it the baseload power without duct firing. Divide by the latter. And you find that the percent goes up by 16.3 percent.

You do the same thing with cooling water. At maximum power duct firing, baseload, subtract baseload from maximum. Divide by

baseload and you get 33 percent.

BY MR. NAFICY:

Q So based on this calculation is it your opinion that eliminating duct firing would be a reasonable alternative to reduce the impact caused by the once-through cooling?

A Yes, it would be a definite benefit.

Q And what about the air impacts that is caused by duct firing, would this also result in benefits there?

A Certainly judging from yesterday's testimony, yes.

Q Now, duct firing, is that -- you've studied the AFC, and does that appear to you to be an integral component of the project such that with its elimination the project couldn't stand on its own?

A Well, it calls for an opinion. My opinion is that it would be a fine baseloading plant without duct firing.

Q Now given the relative high cost of producing the additional 16 percent in power, or both in terms of if it is dry -- if it is once-through cooling, and regardless of that question, if it is just air emissions, does it appear that

the additional power justifies the additional cooling water?

A In my opinion, no.

MR. NAFICY: On direct I don't have anything further.

HEARING OFFICER FAY: Okay, why don't we just hold off cross-examination until he completes his rebuttal, and then we'll take it all at once.

MR. NAFICY: Very well.

On cross-examination we would like -- I mean, I'm sorry, on surrebuttal we would like to pass around a copy of a paper that Dr. Wagner had previously prepared and entered into the docket, which actually Mr. Waters had referred to in his cross. And basically provides the basis for his testimony on surrebuttal.

HEARING OFFICER FAY: And how did this enter the record previously?

MR. NAFICY: It was docketed, and we weren't necessarily going to use it, but in light of the rebuttal testimony we feel that it would be helpful in providing the basis for the rebuttal.

HEARING OFFICER FAY: Okay, let's go off the record.

(Off the record.)

HEARING OFFICER FAY: Back on the record. It appears that the document that Mr. Naficy has provided the parties has been previously docketed, and in Duke's exhibit 159 they refer to it as comments on cooling water intake analysis.

Their response was to this, and it references that Dr. Wagner's document was docketed on December 11th of 2001.

MR. ELLISON: Mr. Fay, that is correct. I do want to register an objection, though, to the inclusion of this report in the record.

Once again, CAPE, in the guise of rebuttal, is augmenting their direct testimony with significant reports.

Now, the fact that something has been previously docketed does mean that we've seen it before, but it certainly doesn't mean that we prepared cross-examination for it. And we have not.

There is an enormous volume of information in this docket, and it is certainly not appropriate to expect that all of us have prepared to cross-examine on everything in the docket. We prepared to cross-examine on those

things that were previously filed.

We have done rebuttal in this proceeding in the nature of, you know, specific responses to testimony that's been filed orally. But that's a different thing than people walking in with substantial new reports.

The last point that I would make is the very fact that this was docketed previously by CAPE is very good evidence that they could have filed this with their direct testimony. They chose not to. They should have to live with that choice.

HEARING OFFICER FAY: Well, I take your objection into account. And what I'd like to do is in light of the fact that the applicant has had an opportunity, and apparently has actually already commented on this, to recognize the surprise factor and the disadvantage that CAPE has put you in. Suggest that we do the best we can today, and give you the option of requiring Dr. Wagner to return at a later date for further cross-examination on this.

I've got to again admonish CAPE for carrying out surprise that we strongly disfavor. And other counsel begged ignorance on this. I

don't know why. We require all testimony to be prefiled. And it's certainly a matter of degree, somebody brings a restatement in the form of a graph that contains all the information that was prefiled, or they make a few corrections, if they're minor in nature, to their testimony.

But, yesterday hundreds of pages were offered by CAPE. And today's offering is much shorter perhaps, seven or eight pages, but it means that one party is subjected to surprise. And we want to avoid that so all the parties can be well prepared when they address the Committee.

So, with that admonition and with the understanding that Dr. Wagner may have to be recalled, I'll let you go ahead, Mr. Naficy.

MR. NAFICY: Well, I think, first of all I don't think really this is a real surprise because there was extensive rebuttal. But I think that having allowing us, or allowing the proceeding to go forward and thus engaging in direct testimony here on this document, and then giving the applicant and the rest of the parties a second bite at the apple by going home and preparing -- having extra time to prepare cross-examination would work a great disadvantage to

CAPE.

So, I mean I understand if they want to have time to review a document they've already seen and commented on. But I don't think that they should be allowed to sleep on it and come back the next day and refer to other documents and what-have-you.

We've been subjected to the same conditions. So, if they're going to be allowed to come back with prepared cross-examination, then I would suggest that we defer the entire issue until such time that, you know, maybe -- until tomorrow, because I think that would be greatly prejudicial to the Coastal Alliance.

MR. ELLISON: If I can comment on that, let me just say that the entire point of filing ahead of time, testimony, is to allow people to sleep on it and to prepare rebuttal. And that those rules apply equally to everybody.

You've had our direct testimony for a considerable period of time, and have had the opportunity to prepare cross-examination on it.

The proposal that you make is entirely out of order and inconsistent with the way this proceeding is being conducted.

And, Mr. Fay, let me say one more thing on this issue. I was not the attorney on air quality yesterday. Had I been, I would have registered an objection that was particularly strong because I predicted this. I asked CAPE's attorney, when I saw that they had identified two hours of direct testimony in their witness time estimates for air quality, whether they understood these rules. And we had a conversation; Bonita Churney and I had a conversation in front of this Committee that I expect you recall on precisely these rules and the fairness of this proceeding in this way.

And to now have CAPE, on two of the most important issues in this proceeding, engage in this kind of, and I would use the word chicanery that was used yesterday, is extremely objectionable.

HEARING OFFICER FAY: Okay. Well, Mr. Naficy, I think you've misconstrued the way we do business. You've sprung the surprise on the other side. If they can deal with it today, they will do so. And may choose not to call Mr. Wagner back.

But if they feel that they have the need

to do that, it is their option to do that. And I guarantee you that if Duke comes up with a big pile of information like your party did yesterday, at the last minute, you can defer and ask the Committee to call all those witnesses back. We've been doing business this way for years, and it seems to me the only fair way to handle rebuttal.

So, the matter's been ruled upon. I suggest you go forward with your rebuttal.

MR. NAFICY: Before I start can we mark this for identification, please?

HEARING OFFICER FAY: Certainly. The cooling water intake analysis Duke Morro Bay is the title. And we'll mark that as exhibit 189.

BY MR. NAFICY:

Q Dr. Wagner, I'm referring now to exhibit 189 entitled cooling water intake analysis Duke Morro Bay.

Did you prepare this document?

A Yes.

Q And there's some -- the factual contentions in there that you -- the factual references in there, were they all personally checked by you and you have identified all the references, yourself?

A Yes.

Q Now, what was the purpose of the study?

A The purpose of the study was to get an unbiased independent analysis of how much cooling water the extant power plant uses, and how much cooling water the new plant would be projected to use. And to compare the two.

Q And did you, before we get into your analysis, the substance of your analysis, did you arrive at a conclusion on that question?

A Yeah, the conclusion I reached was essentially the same one we've read from the FSA, that the new plant, within reasonable assumptions, and they are assumptions, could be expected to use about the same amount of cooling water per year as the existing plant, or more, a little bit more.

Q Okay. Now, in arriving at your conclusion did you examine the reports of water use by the Morro Bay Power Plant over the last 15 years or so?

A No, the column, the table, the spreadsheet in the report is from information provided by Duke in answer to a data request.

Q Okay, so it only goes back to 1990?

A That's correct. I didn't have anything

earlier than that.

Q Now, have you compared the information contained in this table which, I believe is on page 3, with the information provided to this proceeding by the Regional Water Board today?

A Just very briefly because I saw this for the first time today. It looks like they're consistent.

Q Okay. And by looking at the water use in the last -- well, since 1990, what did you come up with as a -- what conclusion did you arrive at as the average use over the last ten years?

A The average over the last ten is not in my report, but I did it. And as I recall, through 1999, which is when I did that calculation, it was somewhere around 370 million gallons a day.

Q Now, in your calculations did you notice any trends or any differences between water used in the last, in 1999 and 2000 relative to the years previous to that that you had access to data?

A Oh, yes, very definitely. If you look at the five-year average, actually including the year 2000, from 1996 through 2000, the plant operated on the average about 30 percent of the

time.

For the year 2000 that jumped up to 60 percent. And I just learned within the last day or so that it's approximately just a hair under 50 percent for the year 2001. So there's been a dramatic increase over the last couple of years.

Q Now, you have heard testimony today about the proposed future use of water by the -- the use of water by the proposed plant. And that it's going to result in a great reduction over the averages that we've seen here over the last ten years.

In your estimation is that a correct conclusion?

A No.

Q Now what numbers did you use to predict future operation of the proposed plant?

A I used numbers that were provided by Duke and are referenced in my report. I used what I call the highest, which I think they'd agree is the highest, and that was, I believe, 4000 hours with duct fired and 4400 without.

And I used what has shown up in the table in the Water Board's report as I think 90 percent of that, which I call the low estimate.

These correspond, if my numbers are right, to 96 percent operation schedule and about 86 percent respectively.

Q So the 86 percent of figure -- does that also correspond to what we've identified as --

A Yes.

Q -- 188?

A Yes.

Q There, I believe, it was read into the record that they predicted a conservative high 90 percent future use, is that correct?

A No. The number I got was -- hang on a second. The only thing I could tell you is that the numbers that I got, which have come up today, add up to 8400 hours, and they give -- which is 96 percent of the number of hours in a year.

Q Now, arriving at your calculations as to the future use of the plant, did you also look at some available data about the future energy market in California?

A Oh, yes. There's a major report that at the time I prepared this was still current, by Cahn and Lynch. It was done for the Governor, entitled California's electricity options and challenges. A report to Governor Gray Davis.

That's about a 150-page report, if I remember correctly.

Q And did you study this report?

A I did.

Q And how did you incorporate what you gleaned from this report into your calculations to predict future energy production by the proposed plant?

A Oh, well, it simply was a question of whether or not there will be a shortage over the next several years, as predicted in this report. And the report came to the conclusion there would actually be a surplus of production.

Q Okay, now --

A And that did influence my estimations of how the existing plant would be used versus the new one.

Q Now, based on these future predictions about the energy market, did you also arrive at some conclusions as to how much the existing plant could operate were it able to be, you know, were its life to be extended into the future?

A Yeah. I just assumed it would revert to the historic average, before the transitory energy crisis that we're on the downside of now. The

historic average being something on the order of 30 percent.

Q Thirty percent --

A Operating schedule 30 percent. That could be off by a few percent. I suspect it's not going to turn out to be terribly far off.

Q And the operation of the existing plant, about 30 percent, how would that compare to Duke's prediction of the operation of the proposed plant in terms of water use?

A Well, it's comparable. About the same. Within the uncertainty of this kind of speculation. I would say that the two would be operating using about the same amount of cooling water over a year. The new one, maybe a little more.

Q And based on your review of the information available about the energy market, did you arrive at any conclusions about whether ability to produce energy in that future market would be related in any way to the efficiency or cost of electricity production?

A Oh, yes. My assumption was that if the extant plant continues to operate, it will be at some competitive disadvantage because the cost per

kilowatt will be higher than that of the new plants that are coming online.

Therefore, it would -- and this is an assumption -- therefore, that it would probably most likely revert to peaking plant status. Probably summer peaking.

MR. NAFICY: Nothing further on direct.

HEARING OFFICER FAY: Does that conclude your rebuttal?

MR. NAFICY: Well, sur-surrebuttal.

HEARING OFFICER FAY: Okay, fine. Now is your witness available for cross-examination?

MR. NAFICY: Yes.

HEARING OFFICER FAY: Would you like to introduce or move your exhibits at this time?

MR. NAFICY: I could do that. I expected to have some redirect or -- rebuttal, so if you want we can enter all of them at the same time. That would be 185, 188, I believe, and 175.

MR. ELLISON: May I say something? With regard to the reference to sur-surrebuttal, before we go any further, you do understand that redirect is limited to the scope of cross-examination?

MR. NAFICY: Is that a question?

MR. ELLISON: Yes, it's a question. Do

you understand that?

MR. NAFICY: Yes.

MR. ELLISON: So, if you have any further rebuttal you understand that now is the time to do it?

MR. NAFICY: I understand -- I have a rudimentary understanding of the rules of evidence, and I'm sure we'll get a ruling if I get it wrong. So I suggest that we move forward.

MR. ELLISON: No, I suggest we clear it up right now.

HEARING OFFICER FAY: Yeah, this was your rebuttal testimony. There will be no further rebuttal testimony.

MR. NAFICY: No, but if the issues come up on cross or whatever you want to call it, --

HEARING OFFICER FAY: You may conduct redirect within the scope of the --

MR. NAFICY: Absolutely.

HEARING OFFICER FAY: -- cross-examination. Okay.

MR. NAFICY: That's --

HEARING OFFICER FAY: All right. And now I need to go over the exhibits that you moved. I have Dr. Wagner's testimony, exhibit 175; the

document that he put forward today as part of his rebuttal, exhibit 189. Did you say there was another one, as well?

MR. NAFICY: I believe we called the table that we referred to as 188, that was table 2.1.

HEARING OFFICER FAY: Okay. Any objection to receiving those at this time?

Okay, I hear none. We'll enter those into the record.

MR. ELLISON: Well, let me renew my objection to the admission of 189, but I understand you've already ruled on that.

HEARING OFFICER FAY: Okay.

MR. ELLISON: But less there be any doubt, we do object to the admission of exhibit 189.

With regard to the table, exhibit 188, we do not object to introduction of the table with the caveat that if there -- this is obviously one table from a very large report. And I would like to reserve the right to review the remainder of the report, and to augment this exhibit if there are other portions of the report that are relevant, or provide context for this table.

HEARING OFFICER FAY: I'll note the request, and we will accept -- receive into the record exhibit 175, 188 and 189, over counsel's objection.

And Dr. Wagner is available for cross-examination. Mr. Ellison.

MR. ELLISON: Thank you.

CROSS-EXAMINATION

BY MR. ELLISON:

Q Good afternoon, Dr. Wagner.

A Good afternoon.

Q First of all, at your testimony in the summary you say that CAPE agrees with staff's assessment that the project, as proposed, would use more cooling water than the actual cooling water volume used by the existing power plant based upon the data from the last 15 years. Do you see that?

A Yes.

Q Your reference to the staff assessment, was that the reference to the table 3 that we discussed earlier today?

A Yes.

Q Do you agree that that table 3 is a comparison of the average water use of the

existing plant over the last 15 years to the maximum operation of the new plant at full capacity including duct firing?

A Yes.

Q With regard to your reliance on the staff's assessment, were you relying upon anything else?

A No.

Q Okay, with regard -- did you rely upon anything other than the staff assessment in coming to this conclusion?

A Just my own analysis.

Q And your own analysis is what is set forth in exhibit 189?

A Yeah.

Q Okay. Did you rely upon anything else other than that?

A No, I did read your response to that analysis.

Q Okay. First of all, your five-year average number in exhibit 189 comes to the conclusion of 387 mgd, correct?

A Yes.

Q Exhibit 186, which was Mr. Waters' bar graphs summarizing his testimony, contains a five-

year historic average number of 437.

A Yes.

Q Do you see that?

A Yes.

Q Am I correct in my understanding that the difference between your 387 and Mr. Waters' 437 is that Mr. Waters used the five years, the most recent five years, including 2001 and you used the five years ending in the year 2000?

A Yes. That's correct.

Q Is there any other difference that you know of?

A Not that I know of.

Q Okay. Now you testified that with regard to market conditions you relied upon a report by a Dr. Cahn and another individual, is that correct?

A Yes.

Q Did you rely upon anything other than that?

A No.

Q Did you do any independent analysis of your own on market conditions?

A Oh, no.

Q So you relied solely on this report?

A Yes.

Q And you're not offering this report in evidence, correct?

A No.

Q And the report, as you understand it, says that there would be a surplus in electric generating capacity in the future, is that correct?

A Yes, out to as far as the report goes, which is 2007.

Q Now could you remind me of what capacity factor you assumed for the new plant?

A Oh, I used two capacity factors. One was the 8400 hours a year capacity factor which is 96 percent. And the other was 90 percent of that, which I think is around 86 percent.

Q So you used the 96 percent capacity factor and 86 percent capacity factor --

A Yeah, it's 90 percent of 96 -- 86.

Q And you used those capacity factors notwithstanding your reliance on the report that suggested there would be a surplus of electric generating capacity --

A That's correct.

Q -- in the future, is that correct?

A Um-hum.

Q Are you aware of any power plants comparable to the Morro Bay facility that have achieved a 96 percent capacity factor over more than a single year?

A No.

Q Are you aware of any that have achieved an 86 percent capacity factor?

A No. I simply used the numbers that Duke provided.

Q So you're relying upon Duke for those estimates, is that correct?

A Yes.

Q You understand that Duke's estimate of a reasonable capacity factor was 80 percent, correct?

A Well, it wasn't in the material from which I selected this. That 80 percent has come up at a different time. From the information available when the report was written, those are the numbers that I was able to ferret out of the AFC, the 316B and so forth.

Q With regard to your numbers on what's being projected overhead here, --

A Yes.

Q -- are you assuming any limitation on the hours that a facility can use duct firing?

A Well, that's not part of that calculation.

Q So the answer is no, correct?

A Yeah. Yes, the answer is no.

Q Okay. And so when you achieved this 33 percent number, what assumption are you making regarding the relative amount of duct firing versus baseload capacity?

A No assumption.

Q So you're assuming that the plant is operating -- well, let me ask this, when you give that 30 percent number, are you simply comparing on a peak day basis? In other words, the cooling water when duct firing had a peak moment in time? Versus cooling water when operating at a baseload capacity at a peak moment in time? Or -- well, I'll stop there. Is that the comparison you're making?

A Yes, pretty much, yeah. Um-hum.

Q All right, so you are not comparing for these numbers, the --

A No, this is -- go ahead, finish the question.

Q Am I correct that you are not making a comparison of the cooling water impact of duct firing over time?

A Not really, no.

Q And if the Committee were to find that there was a limitation on the amount of duct firing that Duke could undertake, then that would not be reflected in your calculation, correct?

A That's correct.

Q Can I ask you to refer to exhibit 186, the bar graph.

A Yes.

Q Do you have that in front of you?

A I do.

Q Looking at the bar that's the most, the nearest to the left, the 725 mgd bar, do you see that?

A Yes.

Q Do you have any reason to disagree with that as representing the existing permit level?

A No.

Q Moving to the next bar, the 668, the existing maximum pump capacity, do you have any reason to disagree with that?

A No, that's a correct number.

Q With respect to the 475 mgd as a future daily maximum, do you have any reason to disagree with that?

A No.

Q Okay. And with regard to the 410 which reduces the 475 to account for limitations on duct firing, you have testified that you don't have an opinion regarding those limitations, correct?

A Correct. I simply used the figures that Duke gave.

Q Okay. Do you have any reason to disagree assuming that there is a limitation --

A That's --

Q -- that that 410 is correct?

A -- that's about right. I think, wasn't there a small correction made to that this morning? But it's a very small correction.

Q Well, the correction was to 410.

A Okay.

Q It was 413 prior to that. But with that correction do you have any reason to disagree with that?

A No.

Q Now with regard to the average use numbers, do you have any reason to disagree with

the 518 number as representing a three-year average number from '99 to 2001?

A I haven't done the arithmetic, but I assume it's right.

Q Okay. And the same question with regard to the 437 number?

A Likewise.

Q Okay, with regard to the 328 projected future number, if you were to use an 80 percent capacity factor, do you have any reason to disagree with that?

A I guess that's 80 percent of 410, yes.

Q So you have no reason to disagree with that number --

A No.

Q -- 80 percent capacity --

A Not with the --

Q -- factor?

A -- arithmetic, no.

Q Okay.

MR. ELLISON: That's all I have, thank you. We do reserve the right to recall Mr. Wagner after we've had an opportunity to review this document.

HEARING OFFICER FAY: All right. Will

you be informing the Committee by the time we conclude tomorrow on that? Or what timeframe can we expect?

MR. ELLISON: We will look at it tonight. I don't know if Mr. Wagner's -- I understand you have to leave today, correct?

DR. WAGNER: Yes.

MR. ELLISON: Can you be available tomorrow?

DR. WAGNER: Yes.

MR. ELLISON: What we will need to do, I don't know how late we're going to go today. We do have visual resources as well, but --

HEARING OFFICER FAY: We will not go past 6:00 this evening.

MR. ELLISON: Okay. We will review this document after dinner. Is there a way that we can -- we can handle this off the record, but if you are available tomorrow, we may need to recall you. We will work out with you some way of notifying you of that if that's acceptable.

DR. WAGNER: Certainly.

MR. NAFICY: Well, I do have to say that I may not be available. I am not available all day tomorrow, but I may make myself available at

some point, and I don't even have my calendar with me. So I would be very happy to work with the Committee and Duke representatives. But I know for sure that I have something in the morning. So.

HEARING OFFICER FAY: Well, we'll have to address this off the record. We are scheduled for a noticed hearing tomorrow on these topics.

CHAIRMAN KEESE: I am going to note for all the parties that it's very obvious that different parties made different assumptions. But at least from where I'm sitting there's a consistency among all that can be reconciled.

And I don't know that there's much more need to pursue the numbers. I think there's maybe some conclusions and some opinions, but the numbers are reasonably reconcilable.

We've had, as I say, different assumptions, different ways of looking at it to make different numbers. But they're all reasonably consistent.

HEARING OFFICER FAY: Okay. Anything further, Mr. Naficy?

MR. NAFICY: Not from this witness or on this topic.

HEARING OFFICER FAY: Okay. Then we'll move to the staff's cross-examination of CAPE' -- right, that's what I'm asking you, would you like to cross-examine CAPE's witness? No. The City?

MR. ELIE: No questions.

HEARING OFFICER FAY: Okay, thank you. Any redirect, Mr. Naficy?

MR. NAFICY: No.

HEARING OFFICER FAY: Okay.

MR. NAFICY: Well, not at this time unless they come back.

HEARING OFFICER FAY: All right. Yet to be determined, okay.

Just so everybody can follow -- Mr. O'Brien, go ahead.

EXAMINATION

BY MR. O'BRIEN:

Q Dr. Wagner, if we could go back to your graph or chart that was just up on the screen. I confess that I am unable to read that from here without my glasses, and apologizing for that, can you tell me, and I assume this is up there, what the water use is at 1032 megawatts without duct firing and then 1200 megawatts with duct firing?

A Sure. Baseload without duct firing,

247,500 gallons per minute, which works out to be 356 million gallons a day.

Q Okay.

A And with duct firing, 330,000 gallons per minute which is the same as 475 million gallons a day.

Q And that differential you are indicating that that difference is a 33 percent difference in terms of the amount of water needed?

A Yes. It's a 33 percent increase over the baseload figure.

Q Okay, thank you.

MR. ELLISON: Mr. Fay, we have just during this question right here identified a couple of more questions that I would bring Mr. Wagner back to ask.

I think, if you would indulge me, if I can ask them now, it may -- may, I don't want to say will -- but may result in our not having to bring him back, so with the permission of the Committee and CAPE, I'd prefer to ask them now and preserve the possibility that he won't have to return.

MR. NAFICY: We have no objection.

HEARING OFFICER FAY: Fine, go ahead.

CROSS-EXAMINATION - resumed

BY MR. ELLISON:

Q Dr. Wagner, with respect to your comparison of peaking or duct firing capacity to baseload capacity, and the relative cooling water efficiencies of those two things, did you make a comparison of the efficiency of duct-fired capacity to the efficiency of a new peaking plant?

A A new peaking plant?

Q That's correct.

A No.

Q If you did not have duct fired capacity and you had to replace the peaking capacity that duct firing provides, with a new peaking plant, then you have not made any comparison of what the efficiencies of those two things are, is that correct?

MR. NAFICY: I'm going to object to that hypothetical. For one thing, there's definitely facts that are nowhere close to the facts here. And I don't understand where this hypothetical is coming from. I mean there's no facts in evidence for that hypothetical.

MR. ELLISON: Well, --

HEARING OFFICER FAY: I'm going to

overrule the objection because I think he's only asked if this was taken into account in the analysis. It seems like a simple question to me.

DR. WAGNER: It would depend upon what kind of cooling the peaking plant used. If it used air cooling it wouldn't take any water.

BY MR. ELLISON:

Q But have you made any comparison to -- let me clarify. I understand the comparison you've made is the efficiency of duct firing at this plant to baseload capacity at this plant.

A Absolutely.

Q And we have had testimony earlier in this proceeding that the purpose of the duct firing is to offset the need for additional peaking capacity.

So the question is have you made any comparison of the efficiency of duct firing at this plant to the efficiency of a peaking facility, a new peaking facility, or for that matter an existing peaking facility?

A That would provide the same 168 megawatts?

Q That's right.

A No, I have not.

Q Okay. Thank you.

MR. NAFICY: Can I just ask a question exactly on this point?

HEARING OFFICER FAY: Certainly.

REDIRECT EXAMINATION

BY MR. NAFICY:

Q In your review of the AFC or any of the other submittal by Duke, have you seen any analysis of the cooling water required for exactly the scenario that Mr. Ellison just asked you?

A No.

MR. NAFICY: Thank you.

HEARING OFFICER FAY: Okay. Mr. Ellison, can you tell us at this time whether you'll be needing to recall Dr. Wagner?

MR. ELLISON: No, I cannot, because we still have to continue to review the testimony. I did, however, identify those two additional questions, so that's all the questions that we know of now. And we will do our very best to notify the Committee and CAPE and Mr. Wagner, in particular, as to whether we will need to recall him.

I do understand that we are not -- that returning tomorrow on this issue is not an option

because of the availability of CAPE's counsel. And so, you know, if that were an option we would certainly work late into the evening to identify this. But since it's not, I assume if we're going to bring him back it's going to be at a future hearing. And we will notify parties within a week, is that acceptable?

MR. NAFICY: I'm sorry, actually I think I may have been unclear. I didn't say it was not possible to have us back tomorrow. I just said that I'm not available all day to come back.

So, I'm not available in the morning, but I could probably make myself available in the afternoon. But in the morning I have a staff meeting that's been scheduled for weeks, so I can't get out of that.

HEARING OFFICER FAY: We'll ask the parties to -- well, first, counsel, to figure out a way to communicate with CAPE. And if it turns out you need Dr. Wagner to return, coordinate a time and we'll do our best to work that into the schedule tomorrow --

MR. ELLISON: Okay.

HEARING OFFICER FAY: -- for the convenience of all the parties. Okay? I think

this is a good time to take a break. We're going to take a ten-minute break right now, and return with the staff's presentation of its panel on soil and water.

(Brief recess.)

HEARING OFFICER FAY: Let's go back on the record. Continue taking evidence on soil and water resources. And we'll hear from the staff panel. Ms. Holmes.

MS. HOLMES: Thank you. Staff's witnesses for soil and water resources consists of a panel. Why don't we just have them sworn and then I'll have them give their names and which area they're responsible for.

HEARING OFFICER FAY: All right, will the panel please stand and be sworn by the court reporter?

Whereupon,

JAMES THURBER, JOE CREA, MIKE KROLAK

JOHN J. BUCKLEY and JAMES HENNEFORTH

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

MS. HOLMES: Thank you.

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DIRECT EXAMINATION

BY MS. HOLMES:

Q Starting with Mr. Thurber I'd like the panel to kind of go down the row here, state their name and which area of the testimony they're responsible for.

MR. THURBER: My name is James Thurber; I was responsible for groundwater.

MR. CREA: My name is Joseph Crea, Aspen Project Manager on behalf of the Energy Commission, and serving the issue areas for erosion and sediment control and stormwater pollution prevention plans.

MR. KROLAK: My name is Mike Krolak; I'm the CEC Technical lead.

MR. BUCKLEY: My name is Jack Buckley. I'm looking after the flood control aspects of this.

MR. HENNEFORTH: My name is James Henneforth; I'm responsible for water use, water supply and waste discharge.

MS. HOLMES: Thank you. People will probably notice that there's another witness listed on the testimony. That witness is unavailable today. We understand there's no

cross-examination for him. Should the issue of thermal discharge, which is his area of expertise, come up, it's my understanding that we'll be able to handle it during the hearings on biological resources and alternatives.

I think what I'd like to do is to just simply direct the initial questions to Mr. Crea and have him answer them. And if any of the panel disagree, they can so state.

Mr. Crea, was the soil and water portion of exhibit 143, which is the FSA, prepared by you or under your direction?

MR. CREA: Yes.

MS. HOLMES: And was the soil and water resources revision, which has been identified as exhibit 172, prepared by you or under your direction?

MR. CREA: Yes.

MS. HOLMES: And are the witness qualifications contained in exhibit 143?

MR. CREA: Yes.

MS. HOLMES: And are the facts contained in this testimony true and correct?

MR. CREA: Yes.

MS. HOLMES: And are the opinions in

this testimony you best professional judgment?

MR. CREA: Yes.

MS. HOLMES: And is this soil and water testimony adopted by you as yours today?

MR. CREA: Yes, adopted by myself and the panel.

MS. HOLMES: Thank you. Earlier in the proceeding there was testimony from Duke indicating that the design life of the facility is approximately 30 years.

If the project were to operate in excess of 30 years would that change the conclusions with respect to the significance of impacts or the sufficiency of mitigation?

MR. CREA: No.

MS. HOLMES: Thank you. Now, at the risk of bringing the wrath of parties down upon me, I want to turn to two quick rebuttal topics. These questions will be directed to Mr. Henneforth.

Mr. Henneforth, earlier today there was a discussion about capacity factor. And I want to specifically turn your attention to exhibit 186, which is the Morro Bay Power Plant flow comparison that was prepared by Duke. Do you have that in

front of you?

MR. HENNEFORTH: Yes, I do.

MS. HOLMES: First of all, can you explain what's your understanding of the phrase capacity factor means?

MR. HENNEFORTH: My understanding of the phrase capacity factor is the amount of electricity in kilowatt hours or megawatt hours that are generated over a specific period of time divided by the total amount of kilowatt or megawatt hours that would be possible to generate over that same timeframe.

MS. HOLMES: So if you look at the fourth column over, which is called future weighted, and the number at the top is 410 millions of gallons per day, is it your understanding that that, since it's a weighted average, represents 100 percent capacity factor?

MR. HENNEFORTH: Yes, that would be correct.

MS. HOLMES: When you take into account the fact that the future weighted average has 4000 hours of duct firing and 4000 hours of baseload without duct firing, does that change your answer?

MR. HENNEFORTH: It would in the sense

that it's really 4000 hours of duct firing and 4760 hours without duct firing.

MS. HOLMES: Correct.

MR. HENNEFORTH: I believe that's what this represents.

MS. HOLMES: And if you look at the column on the far right, the future average, which is represented by 328 million gallons per day, that's been referred to as representing an 80 percent capacity factor. Do you agree with that?

MR. HENNEFORTH: No, I don't.

MS. HOLMES: Can you explain why?

MR. HENNEFORTH: Well, based on my understanding of what capacity factor is and what this number represents, this number represents an 80 percent of the flow values that we've just discussed.

Based on the 1200 megawatt plant, the capacity factor, using the premise of this flow rate would be less than 80 percent.

MS. HOLMES: Do you have any idea what that number might be?

MR. HENNEFORTH: I think it would be approximately 73 percent.

MS. HOLMES: Thank you. So when we were

discussing earlier today whether or not other plants had operated at a similar capacity factor, it would be your conclusion that if the plant were to be using 328 million gallons per day, you would prefer a comparison with the lower capacity factor?

MR. HENNEFORTH: That's correct.

MS. HOLMES: Thank you. Also earlier today there was a discussion about how many pumps are required for cooling when the plant is in duct firing mode. Do you recollect that discussion?

MR. HENNEFORTH: Yes, I do.

MS. HOLMES: And there was also some discussion from Duke about whether or not, about the impact of the plant operating in, I believe they called it partial duct firing mode. Do you recollect that?

MR. HENNEFORTH: Yes.

MS. HOLMES: And do you know whether or not all eight pumps would be required in partial duct firing mode, or whether or not they could use six pumps in that instance?

MR. HENNEFORTH: I don't know the answer to that. The information I've seen so far says that when you're maximum duct firing you use all

eight pumps; and when there's no duct firing you use six pumps. And a partial mode, it hasn't been identified, to my knowledge, whether all the pumps would be required, or -- they'd be required.

MS. HOLMES: So you don't have any reason to agree with the conclusion that if the plant were operating in what they're calling partial duct firing mode, only six pumps would be needed?

MR. HENNEFORTH: Correct.

MS. HOLMES: Thank you. What I'd like to do now is simply turn to the testimony of the parties and walk through the comments one by one. And I think it would probably be best to start with the comments that the applicant has made.

And I'll let each individual witness who's responsible for these technical areas respond to that.

Soil and water-1, I believe, is a recommendation that affects the area that Mr. Crea is responsible for.

Mr. Crea, Duke has provided several suggestions with respect to soil and water-1. Do you have a response to their recommendations?

MR. CREA: Yes. With response to

comments provided by Duke on site mobilization versus construction mobilization, the staff stands on this that we're going to require the stormwater pollution prevention plan to be submitted prior to site mobilization.

MS. HOLMES: In other words you don't recommend the change the Duke has recommended for changing the timing?

MR. CREA: No.

MS. HOLMES: What about with respect to the recommendation that a sentence be added that identifies required components of the stormwater pollution prevention plans?

MR. CREA: Staff concurs.

MS. HOLMES: Thank you. With respect to soil and water-2, again there was a timing change that was recommended by Duke. Is it fair to say that staff does not support that timing change?

MR. CREA: Correct.

MS. HOLMES: And in addition, there was a suggestion from Duke that language be added, referring to plans being in the form of engineering drawings. Is that a change that staff can support?

MR. CREA: Staff can support that along

with an additional provision that the engineering drawings are delivered by signed and sealed by a professional engineer.

MS. HOLMES: Is that what we have heard referred to before, I believe in this proceeding, as stamped by a licensed engineer?

MR. CREA: Correct.

MS. HOLMES: Thank you. I presume the staff supports the correction to soil and water-3 to refer to the correct Regional Water Quality Control Board?

MR. CREA: Yes, that's correct.

MS. HOLMES: Thank you. Again, similarly, Duke had some recommendations for changes to timing on soil and water-4, which refers to a development permit pursuant to the Morro Bay flood damage protection plan ordinance. Do you support the timing change?

MR. CREA: No.

MS. HOLMES: Thank you. And in addition, Duke had recommended that the word substantive be placed in front of requirements, I think in order to reflect the fact that it's ultimately the Energy Commission's CPM that would give final approval.

Is that a change the staff does support?

MR. CREA: Yes.

MS. HOLMES: Thank you. And I believe we indicated earlier that we support the deletion of soil and water-5 with respect to the section 10 permit.

Soil and water-6, I believe, is Mr. Thurber, so if we could move the microphone. Mr. Thurber, first of all, I'd like to ask you whether or not you're familiar with the Energy Commission's testimony and position -- the staff's testimony and position with respect to waste-3.

MR. THURBER: I am.

MS. HOLMES: Thank you. And could you respond to the recommended changes that Duke has suggested in their testimony? Perhaps it would be easier to just simply walk through the condition.

MR. THURBER: Yes. We understand that DTSC has been appointed as the lead agency for the oversight. And we can support that, along with the inclusion of the Regional Board and the City of Morro Bay.

We are also aware that there were some issues related to Moss Landing where the cleanup was progressing, but not at a pace that would

accommodate the start of construction.

Consequently we continue to look for a condition here that is similar to waste-3 where, in fact, all contamination is cleaned up prior to construction.

MS. HOLMES: Thank you. Does that conclude your comments on soil and water-6?

MR. THURBER: Yes.

MS. HOLMES: In addition there are also some changes that were proposed for soil and water-7, and some of them were also discussed this morning by Duke.

Do you have a response to Duke's recommendation that soil and water-7 be limited to a situation in which MTBE contamination has been certified as fully remediated by the Regional Board?

MR. THURBER: Yes, I do have a response. I would not like to link this to the cleanup, or at least a closure, if you will, by the Regional Board of the MTBE cleanup. Our --

MS. HOLMES: That -- I'm sorry.

MR. THURBER: Our goal here is to monitor the Duke groundwater pumping throughout the construction and demolition phase regardless

of the MTBE cleanup.

MS. HOLMES: So is it fair to say that staff's concern also goes to the issue of well interference as well as MTBE contamination?

MR. THURBER: That's correct.

MS. HOLMES: Earlier this morning there was a comment from the City with respect to the fact that the City has a -- can't remember if it was called zero tolerance policy for pollution, something along those lines.

Is that something that the CEC Staff believes would be appropriate for the CPM to consider, as well? The City's recommendation with respect to MTBE contamination?

MR. THURBER: Yes, we do consider that appropriate.

MS. HOLMES: Thank you. I believe also in soil and water-7 there is a limitation to construction phase and demolition phase. Is that a change that staff supports or wants additional clarification on?

MR. THURBER: We can support it as long as it's clear that that period of time is the full 62 months that's presented.

MS. HOLMES: Thank you. And leaping

ahead to soil and water-10, I believe this is also your issue. There are a number of changes that were proposed here.

First of all, with respect to in the condition, itself, it talks about the wells that need to be used, and the applicant has recommended language to address the situation of MTBE remediation program not being ongoing at the time of the pump test.

Does staff have a recommendation for another well that could be used if the MTBE remediation program has ceased?

MR. THURBER: Well, if the MTBE monitoring wells are no longer available, so there is a potential that they could be available for water level monitoring regardless of site closure, but if they are not available then we would request that a second observation well be used.

MS. HOLMES: All right.

MR. THURBER: -- pump test.

MS. HOLMES: Thank you. And in the first bulleted item does staff support the change from 1000 acrefeet to 730 acrefeet?

MR. THURBER: Yes, 730 would be a more realistic number.

MS. HOLMES: And moving on down to the first bulleted item, does staff support any analysis of drawdown impacts that would be based on a THEIS equation, or does staff prefer a modeling analysis be performed?

MR. THURBER: We prefer the modeling analysis that was suggested this morning.

MS. HOLMES: So staff supports the language that was suggested by Duke this morning with respect to the groundwater flow model?

MR. THURBER: Correct.

MS. HOLMES: And, again, I believe there was a timing issue with respect to -- in the verification with respect to when the aquifer test and analysis shall be submitted.

The change that's proposed is prior to site construction phase, mobilization. Does staff prefer to stick with site mobilization?

MR. THURBER: We do prefer to stick with site mobilization; that will allow adequate time to review the submittal.

MS. HOLMES: Thank you. Do you have any other changes or recommendations with respect to soil and water-10?

MR. THURBER: We didn't touch on the

second bullet of soil and water-10, which was a suggested change of language that the modeling also address the groundwater flow model, it also address potential impacts from Duke pumping on the MTBE plume.

The suggested language is that if in fact the plume had been fully remediated, that they would not be required to do that analysis. And we could concur with that as long as that closure has also been looked at by the City of Morro Bay in reference to their zero pollution policy.

MS. HOLMES: Thank you. Lastly, I believe, with respect to Duke's comments, there is a recommendation that soil and water-11 be stricken in its entirety. Soil and water-11 addresses a need to prepare what's referred to as a CLOMR, a conditional letter of map revision, to the Federal Emergency Management Agency.

The staff witness that addresses flood issues is Mr. Jack Buckley, and I'd like him to respond to Duke's recommendation that soil and water-11 be eliminated.

MR. BUCKLEY: The CEC Staff met with the City Staff this morning; and the City indicated

that they will be submitting the CLOMR. They will be needing the help of the applicant in order to get that piece of work done.

But the CEC Staff agreed with their decision, and we hope we can get this done.

MS. HOLMES: Does the staff support a requirement that there be a condition of certification that mandates that Duke work with and cooperate with the City so that the CLOMR can be prepared in a timely manner?

MR. BUCKLEY: I think that would be appropriate.

MS. HOLMES: Thank you. I think if I haven't missed any of the changes that we've walked through, I'll move to the City's testimony at this point.

Again, I think this is Mr. Thurber's area of expertise. Mr. Thurber, have you had a chance to review the testimony of the City of Morro Bay on soil and water resources?

MR. THURBER: I have.

MS. HOLMES: And I'd like to know whether or not you have a recommendation with respect to the City's suggestion that a portion of your condition which allows the MBPP to provide

backup water in the event of groundwater interference, whether or not that's -- will you support eliminating that option for Duke, or whether you believe that should remain an option.

MR. THURBER: I believe it should remain an option.

MS. HOLMES: So that if the trigger levels were to be hit for either MTBE contamination or for groundwater levels, you believe that Duke should have the option of either reducing its water use to eliminate that or, in the alternative, to provide water to the City?

MR. THURBER: That's correct.

MS. HOLMES: And the City also expresses some concern about well contamination in its desalination wells. Are you familiar with that portion of their testimony?

MR. THURBER: I am.

MS. HOLMES: And is that a concern that you believe requires that the Commission Staff recommend changes to its conditions of certification?

MR. THURBER: Well, we had not analyzed the desalter wells and the desalinization plant because they were not operational at the time we

did our analysis. And the City had not indicated that there was anything pending or near term.

With respect to the language that the City has put forth in terms of perhaps the work plans being prepared by Duke, in reality PG&E, for cleanup, that those work plans reflect that indeed there is a usable, a beneficial use, a down gradient, we would support that. You know, the Regional Board would then acknowledge that these cleanups have to address that use.

MS. HOLMES: Thank you. I think those are all of our questions on direct and rebuttal. And so, with that, I would move the two exhibits, or the soil and water portion of the one exhibit, and make the witnesses available for cross-examination.

HEARING OFFICER FAY: The soil and water portion of exhibit 143, and also the revision?

MS. HOLMES: Yeah, that's 172. And, again, I should make it clear that when we're walking through the soil and water conditions I'm using the numbering that was in the original FSA. I think that's made it a lot easier, although staff did recommend in the revision that the numbering be changed. I think it's probably best

to wait to do that until after all the testimony is taken.

HEARING OFFICER FAY: Okay. Is there objection to receiving those? All right, we will receive those into evidence.

I'm just going to digress here for a moment. It reminds me, as we go through with all these changes, I want to encourage the parties in their briefs to offer in strike-out-and-underline form the exact format and/or changes that they would like to see to the staff-proposed conditions of certification, including the staff. Because the staff, in some cases, has agreed with changes proposed by other parties.

So that we get a very clear picture, in relationship to the FSA, what changes the parties would like to see in the conditions.

Okay, with that, and the panel is available now for cross-examination?

MS. HOLMES: Yes, it is.

HEARING OFFICER FAY: Mr. Ellison.

MR. ELLISON: Thank you. I will address my questions to the panel and you all can decide amongst you who best to respond.

Let me begin with the issue of relative

water use. Am I correct in assuming that would be Mr. Henneforth?

MS. HOLMES: Yes.

CROSS-EXAMINATION

BY MR. ELLISON:

Q First of all, with regard to your testimony just a moment ago, you testified that on exhibit 186, this is the bar graph that we've been discussing, that the 328 mgd number which represented, by Mr. Waters' testimony, an 80 percent capacity factor was, in your judgment, a 73 percent capacity factor. Did I understand that correctly?

MR. HENNEFORTH: That's correct.

MR. ELLISON: Okay. Mr. Waters also testified that he had done a calculation that assumed 4000 hours of duct firing and then adjusted the remaining capacity to achieve an overall 80 percent capacity factor; and that the mgd number for that was, I believe, 334. Do you recall that?

MR. HENNEFORTH: I recall it, yes.

MR. ELLISON: Okay. Would that, in your judgment, represent an 80 percent overall capacity factor with maximum duct firing?

MR. HENNEFORTH: Not based on a 1200 megawatt plant.

MR. ELLISON: I'm sorry?

MR. HENNEFORTH: Capacity factors are based on kilowatt hours generated, not water flow. And you would have to correspond those flows specifically to the kilowatt hours generated.

MR. ELLISON: Let me repeat what Mr. Waters testified to how he did this, because I think there may be some confusion here.

He first of all assumed that the plant was dispatched in full duct firing mode for 4000 hours of the year. For the remaining 4760 of baseload operation. He assumed the number that would achieve an overall 80 percent capacity factor, as I believe you've defined it.

MR. HENNEFORTH: Okay.

MR. ELLISON: With that understanding, would you agree that that's an 80 percent capacity factor?

MR. HENNEFORTH: I don't believe so by virtue of the fact that by taking 80 percent of the baseload flows, taking 80 percent of the megawatt hours generated during baseload. And when I'm saying this plant's rated at 1200

megawatts, you would need to calculate capacity factor based on 1200 megawatts.

MR. ELLISON: Okay. Let me ask you this, let me turn to something else. Do you have exhibit 186 before you?

MR. HENNEFORTH: Yes, I do.

MR. ELLISON: Okay. Do you have any reason to differ with the existing permit number of 725 mgd?

MR. HENNEFORTH: No.

MR. ELLISON: Do you have any reason to differ with the existing pump capacity number of 668?

MR. HENNEFORTH: I don't disagree with it, but I don't have any information to confirm or deny it.

MR. ELLISON: Okay. Do you have any reason to disagree with the future daily maximum permitted amount of 475?

MR. HENNEFORTH: No.

MR. ELLISON: Do you agree that if you assume 4000 hours of duct firing as a maximum, that the future weighted average would be 410?

MR. HENNEFORTH: Yes, if that's the assumption.

MR. ELLISON: Okay. With respect to the historic averages, do you have any reason to disagree with the 518 number for the average of the most recent three years ending December 2001?

MR. HENNEFORTH: No.

MR. ELLISON: And do you have any reason to disagree for the most recent five years ending December 2001 that the average is 437?

MR. HENNEFORTH: No.

MR. ELLISON: Okay. With respect to table 3 on page 4-25 of the staff report that we've been discussing, do you have that in front of you?

MR. HENNEFORTH: Yes, I do.

MR. ELLISON: Am I correct that the circulating water row represents the cooling water that we've been discussing?

MR. HENNEFORTH: That's correct.

MR. ELLISON: And am I correct that the 404,400 mgd number under units 1 through 4 actual flow represents an average of the past 15 years?

MR. HENNEFORTH: Yes, up through September of 2001.

MR. ELLISON: So if you wanted to use the last five years ending December 2001, that

would be the 437 number shown on exhibit 186?

MR. HENNEFORTH: That's correct.

MR. ELLISON: Okay. And with respect to the new Morro Bay Power Plant permitted flow do you agree that that permitted flow is not the same thing as an average annual flow?

MR. HENNEFORTH: I would agree that it represents what the plant is permitted to do, but may not represent what the plant would do.

MR. ELLISON: Does staff have a number for what it reasonably believes that plant would do under realistic conditions --

MR. HENNEFORTH: No.

MR. ELLISON: -- in the future?

MR. HENNEFORTH: No.

MR. ELLISON: Do you believe that either the 328 or the 334 numbers discussed by Mr. Waters are reasonable estimates of that amount?

MS. HOLMES: Excuse me, I think that question's been asked and answered. He asked him if he had an estimate and he said no.

MR. ELLISON: Different question.

HEARING OFFICER FAY: Could you repeat the question, Mr. Ellison?

MR. ELLISON: The question was does he

have a reason to -- does he believe that the numbers that Mr. Waters came up with -- he's testified he did not come up with numbers of his own, so now I've asked him does he believe that the numbers that Mr. Waters testified to are reasonable.

HEARING OFFICER FAY: Objection overruled. Answer the question, please.

MR. HENNEFORTH: The numbers that Mr. Waters came up with are based on a set of assumptions that involve items that I don't have the background to respond to, primarily items such as the market conditions.

MR. ELLISON: Do you have any experience with capacity factors of power plants such as the Morro Bay Power Plant?

MR. HENNEFORTH: I have some experience with power plant capacity factors, yes.

MR. ELLISON: And would you agree that an 80 percent capacity factor is a conservatively high capacity factor for a power plant of this type?

MR. HENNEFORTH: Well, not necessarily. But I will qualify that by saying most of my experience is with cogeneration projects which do

achieve much higher capacity factors.

In the plant that -- in looking at the design of the plant that's being proposed it should have the capability of running at a much higher capacity factor than 80 percent.

MR. ELLISON: I do want to distinguish between the capability of a plant to run, and the likely amount that a plant will achieve.

We do have testimony under reliability in this proceeding regarding the capability of the plant to run, and I believe that number was as high as 95 percent.

But assuming realistic conditions plants do not run to their full capability all the time, do they?

MR. HENNEFORTH: Not necessarily.

MR. ELLISON: Do they ever?

MR. HENNEFORTH: They potentially could get close to it.

MR. ELLISON: For how long a period of time?

MR. HENNEFORTH: Oh, months.

MR. ELLISON: Could they do it for years?

MR. HENNEFORTH: They could do it for --

well, the variability of a plant is calculated based on what the plant should be able to do. It's available to run at that level, and should be -- and is designed to run at that level, and is capable to run at that level.

Whether it does or not is related to other conditions.

MR. ELLISON: Let me be clear because my questioning wasn't, and I apologize. I do want to distinguish between capability and what is a reasonable probability. Do you have that distinction in mind?

MR. HENNEFORTH: I understand what you're asking, but I don't have all the details or the other factors that you would include in your reasonable expectation of what it would run.

MR. ELLISON: Is another way of saying a reasonable expectation for what a plant would run, is another way of saying that to say what do you expect the capacity factor to be?

MR. HENNEFORTH: I think you could put it that way, yeah.

MR. ELLISON: Do you have an expectation for the capacity factor of this plant?

MR. HENNEFORTH: No, I don't.

MR. ELLISON: Do you agree that at a minimum it would have to be maintained?

MR. HENNEFORTH: Yes, I do.

MR. ELLISON: So it's not going to achieve 100 percent capacity factor, is it?

MR. HENNEFORTH: Not over the long term.

MR. ELLISON: Okay. You mentioned some experience with other power plants, what would you say -- what is the highest actual capacity factor that you're aware of for a plant that you know operated for at least a year?

MR. HENNEFORTH: I don't have an exact number, but I have seen plants that have operated above 90 percent, perhaps 92, maybe even 93 percent.

MR. ELLISON: For over a year?

MR. HENNEFORTH: For over a year.

MR. ELLISON: Were those cogeneration projects?

MR. HENNEFORTH: Yes.

MR. ELLISON: And do you agree that because of the requirements of providing steam to a steam host that cogeneration projects often achieve higher capacity factors than this plant can be expected to achieve?

MR. HENNEFORTH: I would say that if this plant were called upon to operate at that level it could.

MR. ELLISON: That's not my question.

MR. HENNEFORTH: I understand.

(Laughter.)

(Parties speaking simultaneously.)

MR. HENNEFORTH: -- and I can answer the cogeneration part of it, but I can't answer the noncogeneration part without putting that qualification on it.

MR. ELLISON: If the plant were to operate at 100 percent capacity factor, which you have testified it will not because of at least maintenance, correct?

MR. HENNEFORTH: That's correct.

MR. ELLISON: Okay, if it were to do that that would be the 475 number, correct?

MR. HENNEFORTH: That's correct.

MR. ELLISON: You have testified that the highest capacity factor -- that you've seen plants run as high as 92, correct?

MR. HENNEFORTH: I'm going by memory, and I'd say I've seen plants run over 90 percent, perhaps 92, 93 percent I think is what I said.

MR. ELLISON: So 92 or 93 is the highest that you can recall for a cogeneration project, correct?

MR. HENNEFORTH: That I can recall.

MR. ELLISON: Okay. Wouldn't you agree that it would be reasonable to assume that this project, which is not a cogeneration project, would be at or below that capacity factor?

MR. HENNEFORTH: I don't know that I would put that kind of limit on the plant.

MR. ELLISON: I'm not asking you to put a limit on it, I'm asking you -- you're testifying as to the relative water use of this plant. The existing project compared to the new, whether the water use is going to go up or down.

I think it's reasonable, given the Committee's baseline direction, that staff provide a number for the five-year baseline, which I believe you've done. I think you've agreed that it's 437, correct?

MR. HENNEFORTH: That's correct.

MR. ELLISON: Okay. Now the Committee needs something to compare that to. And I think it's appropriate for staff to provide its best judgment as to that number.

MR. HENNEFORTH: Well, I'm not the person to provide that on the basis that as you said, it incorporates forecasts of market conditions. And I'm not an expert in looking at what the market will be in the future.

What I've looked at is, again, the capability of the plant.

MR. ELLISON: Do you know what a 90 percent capacity -- ignoring the duct -- any limitation on duct firing, and assuming 90 percent capacity factor, what would that number be?

MR. HENNEFORTH: I haven't tried to calculate it.

MR. ELLISON: Would it be 90 percent of the 475? The 475 you testified was 100 percent.

MR. HENNEFORTH: Is 100 percent, right. And --

MR. ELLISON: So, am I right that 90 percent --

MR. HENNEFORTH: -- duct firing --

MR. ELLISON: -- would be -- no limitation on duct firing, capacity factor as you have defined it, 90 percent would be 90 percent of 475, right?

MR. HENNEFORTH: I would say that's

probably true.

MR. ELLISON: Okay. Subject to check are you willing to accept the calculator over here that says that that's 427.5? If you want to check it, you can.

MR. HENNEFORTH: I would accept it as stated there.

MR. ELLISON: Okay, thank you.

CHAIRMAN KEESE: Mr. Ellison, without attempting to interrupt your flow here, I do have a question and that is capacity factor, and the way we're using the term.

And I gather capacity factor in a plant without duct firing is based on nameplate capacity. And is the suggestion here that capacity factor in a plant with duct firing is still based on nameplate capacity? Is that -- I'm asking for the common use of the term just so we know what we're talking about.

Because I've heard testimony over here about 80 percent capacity factor. What is the term? Are we agreed on what the term is? Capacity factor?

MR. HENNEFORTH: The way I'm using it is based on what the maximum ability of the plant

is --

CHAIRMAN KEESE: Eighty percent of the maximum, whatever kind it is?

MR. HENNEFORTH: That's right. That's right.

CHAIRMAN KEESE: And --

MR. HENNEFORTH: 1200 megawatts --

CHAIRMAN KEESE: -- combined cycle with duct firing would still use 80 --

MR. HENNEFORTH: Yes.

CHAIRMAN KEESE: -- would still --

MR. HENNEFORTH: That's the way I'm applying it, yes.

CHAIRMAN KEESE: Okay, and is that -- I guess that would be a standard Energy Commission use of the term?

MS. HOLMES: That's correct, and that's why we asked the questions we did. We were concerned that it was being used differently.

CHAIRMAN KEESE: Thank you.

MR. ELLISON: And just to clarify the record, I think it is important that we be clear here. I think what's important is to understand the way these numbers have been calculated, and not the semantics.

We would agree, for the purposes of this discussion, that we will use staff's, Mr. Henneforth's, description of capacity factor as capacity factor.

There is a different, perhaps we need a different term for the percentage of -- where the numerator is the actual kilowatt hours --

(Laughter.)

MR. ELLISON: -- delivered by the plant, and the denominator is the maximum --

CHAIRMAN KEESE: We've been over the numbers a lot.

MR. ELLISON: -- capability of the plant --

CHAIRMAN KEESE: I think we understand. I just wanted to make sure --

MR. ELLISON: I think that's where the difference is.

CHAIRMAN KEESE: I just want to make sure we use the right term when we characterize this in our decision.

MR. ELLISON: Okay, well, just for the sake of my -- I'm not sure I have any more questions that need this, but just in case, let me, from this point forward I will refer to

capacity factor to mean as you have defined it.

MR. HENNEFORTH: Okay.

MR. ELLISON: Meaning the numerator is the actual kilowatt hours and the denominator is the nameplate capacity times 8760.

And I will use the phrase legally adjusted capacity factor --

(Laughter.)

MR. ELLISON: -- to represent the case where the numerator is the actual kilowatt hours and the denominator is the number of kilowatt hours that could be generated in a year complying with all permits.

Having said that, --

MR. O'BRIEN: Excuse me, Mr. Ellison, before -- I really hate to interrupt you but I just want to make sure that I understand it.

In terms of what staff is talking about, 100 percent capacity factor is every hour of the year the facility generating 1200 megawatts. And, Mr. Ellison, in terms of what you're talking about, a legal, if you will, legally constrained 100 percent capacity factor would be 4000 hours a year generating 1200 megawatts, and then 4760 hours of the year generating 1032, is that

correct?

MR. ELLISON: With the caveat that I'd have to check the 1032 number, I believe that's correct, yes.

Mr. Rubenstein testified that he believed that any greater operation than that would exceed the limitations of the permit, the aquatic permit that we discussed yesterday.

Now, with all that clarification, let me just ask you again, using capacity factor, 100 percent capacity factor would be the 475, correct?

MR. HENNEFORTH: Yes.

MR. ELLISON: Ninety percent capacity factor, subject to check, is the 427.5?

MR. HENNEFORTH: Yes.

MR. ELLISON: Okay. And if you believed it was 80 percent, it would be 80 percent of 475, correct?

MR. HENNEFORTH: Yes.

MR. ELLISON: Okay. And I apologize if this has been asked and answered, I'm not sure whether it has or not.

Do you agree that this plant in the future will not operate at 475 on a long-term, continuous basis?

MR. HENNEFORTH: I would agree to that.

MR. ELLISON: Okay. Let me ask you a question about the so-called partial duct firing and whether it would require six pumps or eight pumps.

Yesterday we heard testimony from the air quality witnesses that you might be able to exceed 4000 hours of duct firing if you did not have maximum baseload operation during the 4760 hours when you were not duct firing.

Are you with me? Do you understand that?

MR. HENNEFORTH: I wasn't here, but I understand what you're saying.

MR. ELLISON: Okay. The question is, for you as a water witness, the question is if you were to reduce the baseload operation of the plant during nonduct firing hours, would there not be a reduction in cooling water use associated with that reduction in baseload operation?

MR. HENNEFORTH: I don't necessarily think that's a given in that my understanding of the design of the plant is that there are eight pumps total, six of which operate when duct firing is not in service. All eight are, when there's

duct firing.

At incremental parts of that it's not clear that pumps would be shut back. I don't believe these pumps are throttled back. I don't believe they're variable speed. I believe either a pump is on pumping 41,250 gallons a minute or it's off.

So, at any particular part-load in theory you could run all the pumps all the time; the pumps aren't limited by anything that I know of. The pumps, you know, the pumps could continue to run. You probably wouldn't do that, but it's possible to do that.

So that you could have, you know, I think four pumps running even at 1032 megawatts. So when you start talking about part-loads in there, I haven't seen anything that says that here's a specific gpm or gpd that applies to 30 percent load.

MR. ELLISON: Does that complete your answer?

MR. HENNEFORTH: Yeah. Does it answer your question?

(Laughter.)

MR. ELLISON: No, so I'm going --

MR. HENNEFORTH: Okay. Let's try again.
MR. ELLISON: First of all I'd like you to assume that the power plant operator will not operate the pumps unless they have to. They will operate the pumps to the minimum number of pumps to operate the facility at whatever load level that is being dispatched at. Do you have that assumption --
MR. HENNEFORTH: As an assumption.
MR. ELLISON: Yes, because I say that --
MR. HENNEFORTH: You're asking me to assume that, okay. I can answer that question.
MR. ELLISON: Do you view that as a reasonable assumption?
MR. HENNEFORTH: If that were a station order or directive or something like that, a formal thing that was a policy, then, yeah, I would think he would comply. But other than that I don't know that an operator would think to shut pumps on, turn pumps off just when he sees plant change load.
MR. ELLISON: Well, it -- are you suggesting that you believe that Duke will run the pumps simply for the sake of running them?
MR. HENNEFORTH: No. I'm suggesting

that I've seen nothing to confirm that that's a specific directive. And that I don't know of any legal restraint for them to do that.

MR. ELLISON: That's not my question. I'm just --

MR. HENNEFORTH: I know.

MR. ELLISON: -- asking you don't you think a reasonable operator would seek to minimize the operation of the pumps in order to reserve the operation of the pumps, prevent them from wearing out, in order to reduce its costs because they cost something to operate? All of those reasons, don't you think?

MR. HENNEFORTH: I think Duke would want their operators to do that.

MR. ELLISON: Okay. Now, assuming that the operators do that, and that they try to minimize operation of the pumps, and recognizing that there is somewhat of a step function to the way the pumps operate, nonetheless, generally isn't it true that there is a correlation between the load factor of the facility and its cooling water use?

MR. HENNEFORTH: Are you talking over the long term or --

MR. ELLISON: No, I'm talking immediately, if you run the plant --

MR. HENNEFORTH: Immediately?

MR. ELLISON: -- if you run the plant at less than full baseload without duct firing as you reduce its load, generally speaking, you can reduce your cooling water use?

MR. HENNEFORTH: Let me characterize this and you can ask me in more detail. If, for instance, no duct firing, six pumps are operating, operating 90 percent load I think the flow rate would be the same as at 100 percent load.

It wouldn't be until you got down to, dropped a third when they would drop a pump off.

MR. ELLISON: But the point is --

MR. HENNEFORTH: That's a step function. So, to say, you know, would it correspond to plant load, only in those specific increments with, you know, a third, a third and so forth.

MR. ELLISON: But your understanding is that as you reduce load, you can, at specific increments, turn off pumps, correct?

MR. HENNEFORTH: Absolutely. Load reduced to two-thirds, they drop off one pump.

MR. ELLISON: Okay.

MR. HENNEFORTH: To one-third it would drop off another pump.

MR. ELLISON: All right, I'm going to change subject matter here. I want to ask staff about Duke's proposed changes to conditions of certification 1 and 2, and perhaps others. The issue here is this timing issue of whether the stormwater prevention plans and various other activities need to occur prior to site mobilization or prior to the language that Duke suggested of commencement of construction.

And I'm not sure who's the appropriate panelist here.

MR. CREA: Joe Crea.

MR. ELLISON: Okay. Mr. Crea, Duke's proposal is essentially intended to allow the tank farm demolition to go forward prior to these conditions being triggered, correct? Is that your understanding?

MR. CREA: Could you please repeat the question again?

MR. ELLISON: The question is that the purpose of this amendment, as Duke has proposed, is to allow the demolition of the tank farms to proceed prior to triggering these conditions,

correct?

MR. CREA: I'd like to take a look at soil and water condition of certification number 1, along with Duke's comments for that before I give you an answer.

MR. ELLISON: That's fine.

MS. HOLMES: Just a question of clarification. Are you asking him to testify as to what Duke's intention was in filing this request? Because I think that that's actually not an appropriate question.

MR. ELLISON: No, I'm not. I'm just asking for his understanding of what the effect of the change would be.

MR. CREA: I can answer that with Duke's intent for coming up with this condition --

(Laughter.)

MR. CREA: -- for tank farm demolition. Obviously site mobilization involves bringing in the construction trailers and some construction equipment. And as per CEC's definition, may include some minor grading or disturbance activities to construct utilities to come to such trailers, as well as any kind of access roads that may be needed.

And if you would turn your attention to our November submittal, or Duke's November submittal of the stormwater pollution prevention plan for the construction of Morro Bay Power Plant modernization, page 3 clearly indicates for preparation, which would be during the site mobilization period, that any access road would be developed to provide construction equipment access to the old tank farm area, as well as temporary parking areas for construction workers and staging areas for construction materials, would be prepared with gradual 1 percent slopes and perimeters sediment controls.

So, clearly the draft -- with regards to preparation or site mobilization are not limited the activities to just the demolition of the tank farm area, but may involve other areas on the site which are clearly indicated in the preparation phase of the draft stormwater plan.

That is why staff is asking that these plans be submitted prior to site mobilization in general, not just construction.

So prior to the tank farm demolition, in order for preparation for staging areas and so forth, there may be some earth-moving activities,

and clearly the draft says there will be, to prep the areas for any construction laydown.

Therefore, being that there will be an earth disturbance, there is the potential for erosion, thus potentially resulting in sediment laden runoff. Obviously there is a need for best management practices and obviously this will be incorporated in the stormwater pollution prevention plan for the condition of certification number 1, as well as CEC Staff's condition of certification number 2, with regards to the erosion and sediment control plan.

And also to elaborate on that, by submitting the plan during the pre-tank farm demolition, it insures that staff, as well as any of the other agencies who are going to be given the time to review and comment on the plan, to provide a complete plan or review, as well as a quality technical review, therefore if there are any technical areas that may be deficient on their final submittal, it gives the Energy Commission and Duke ample time to work out the revisions, therefore shouldn't delay you when it comes time to jump into the construction phase of the project.

MR. ELLISON: Am I correct in my reading of the condition of the site mobilization will include demolition of the tank farm? Is that your intention?

And let me be clear. I want to distinguish tank demolition from some of the other things you described, site preparation, construction of roads, things related to getting the site ready for construction.

Understanding that that --

MR. CREA: Site mobilization is included with the tank farm demolition.

MR. ELLISON: That's not my question. My question is are you defining site mobilization, when you say it's included within tank farm demolition, my question is the opposite. Is tank farm demolition site mobilization?

MR. CREA: Is the tank farm site mobilization?

MR. ELLISON: Is just the demolition of the tank farms -- let me be clear here. Duke's concern --

MR. CREA: Is the tank farm --

MR. ELLISON: -- element -- I'm sorry?

MR. CREA: The tank farm is an element

of the project --

MR. ELLISON: Demolition of the tank farm is an element of the project.

MR. CREA: Then as per our soil and water condition of certification number 1, yes, prior to site mobilization of all project elements.

MR. ELLISON: Okay, so I do understand that correctly?

MR. CREA: Yes.

MR. ELLISON: Now, you have said that staff wants to have these plans in place sufficiently ahead of earth-disturbing activities, construction of roads, site preparation, those kinds of things, sufficiently ahead of that to review it and insure that the plans are appropriate --

MR. CREA: Sufficiently ahead of site mobilization which entails any of the earth-moving activities for roads and utilities.

MR. ELLISON: Okay. Is it your understanding that just the demolition of the tank farms, just the demolition of the tank farms, not site preparation in any other way, is it your understanding that that includes any of the earth-

disturbing activities to which these plans would relate?

MR. CREA: Can you please repeat the question?

MR. ELLISON: The question is whether just the demolition of the tank farms includes any of the earth-disturbing activities to which these plans relate.

MR. CREA: These plans relate to all project elements, so the SWEP plan, if you're getting at -- am I correct in -- trying to decipher what you're getting at here. You want to submit a SWEP plan just for the site mobilization and the tank farm activities? In other words, you want to phase this out so when it comes time after the tank farm, you'll submit an addendum to the SWEP plan, which would include, in other words, a control plan for the construction aspect of the site where they'll start doing the grading of the berms and everything else.

Staff would be willing to work with you on that. I have, in compliance cases for other projects, allowed them to phase out the project. So that if you would submit a SWEP and erosion control plan just for the tank farm rendition of

the project, staff would review that. Issue a technical review letter or an approval letter. And the approval would just be for that tank farm area with the provision that prior to any further construction activities that an amended SWEP and erosion control plan be submitted for review and approval.

And also when it gets phased out it also enables staff to sometimes we're able to expedite our review on that.

MR. ELLISON: I think that does solve our problem. Our problem is that there are grading plans that have to be done for the construction of the plan, which if they have to be completed prior to tank farm demolition would probably delay demolition of the tank farms. And which we understand don't relate to the demolition of the tank farms.

So, if I understood your answer of phasing this, we would like to work with staff to develop appropriate language to implement this concept --

MR. CREA: Yes, and I strongly encourage that you have your consultant contact me for the simple fact is phasing is fine, but if we're

phasing a road here, a bridge here, and I'm getting multiple plans and that just becomes tedious and time-consuming.

So it would be good that we can discuss the whole construction aspect and how many phases we're going to look at for the project.

MR. ELLISON: I understand, and rest assured I will have the consultant contact you --

MR. CREA: Okay.

MR. ELLISON: -- and get myself out of the middle of this as fast as I can.

(Laughter.)

MR. CREA: Keep in mind that if final designs are reviewed and the Duke has to come up with revisions, they can just be submitted as an amendment to the original stormwater pollution prevention plan and erosion control plan.

MR. ELLISON: Okay. That's all I have, thank you very much.

MR. CREA: You're welcome.

HEARING OFFICER FAY: Of the entire panel? Mr. Ellison, that's all for the panel?

MR. ELLISON: Yes.

HEARING OFFICER FAY: Yes, okay. Does the City have any cross?

MR. ELIE: Yes. I think this should be addressed to Mr. Thurber, but if I'm wrong, he'll tell me.

CROSS-EXAMINATION

BY MR. ELIE:

Q On COC-10, since I was told to go to you I am going to you, by Mr. Mason. What is the -- how are the five-foot and two-foot triggers arrived at?

MR. THURBER: They were judged to be reasonable numbers to get some progress on this issue. Even during the PSA phase we had identified to Duke we were looking for a pump test. And that has not happened.

So we have nothing to look at in terms of analysis. So what I've done here is I've backed into something that would be, I think, reasonable.

The five feet of influence would allow Duke some pumping without dramatically interfering with the City. Then it's linked to a value of two feet of pumping level at the City wells. And I specify the City pumping level.

So now we're talking that the City is in production pumping groundwater in as many wells as

they choose, really. And combined on top of that is Duke's influence, pumping level influence.

MR. ELIE: Thank you. No further questions.

HEARING OFFICER FAY: Okay. Does CAPE have questions?

MR. NAFICY: Yes. Just very briefly. Again, these are water-related questions.

CROSS-EXAMINATION

BY MR. NAFICY:

Q There was a question about the 90 percent capacity factor operation and whether that corresponded with a 90 percent water use, 90 percent of the maximum capacity. Do you remember that?

MR. HENNEFORTH: I remember the question.

MR. NAFICY: And you agreed, I believe, that there would be a direct correlation between the two, is that correct?

MR. HENNEFORTH: The hesitation is that there's a lot of ways to come up with capacity factors, part-load operation, or plant being operated full load for 90 percent of the time.

In the case of a part-load operation 90

percent of the maximum, I don't believe the direct correlation would apply, because I would think that at 90 percent of plant load with full duct firing case, you would still have all eight pumps operating. So, on that basis, there's not a direct correlation.

If a plant operated at maximum capacity 90 percent of the time and was off for the last 10 percent, then, yes, you would.

MR. NAFICY: Okay, I think you've gone a long way towards answering my next couple of questions. So depending on what percentage of the overall, you know, taken over the course of a year, depending on what percentage of the electricity is generated using full duct burning, especially if it's not always at maximum, it's somewhere around 90 percent, which brings in the extra pumps, wouldn't it be reasonable to assume then that the water use could actually be greater than 90 percent?

MR. HENNEFORTH: If you're saying the plant would be operating at less than 100 percent capacity? If it's operating at 90 percent of its capacity then you would be running the maximum number of pumps.

MR. NAFICY: Correct, so wouldn't that result in water use that is greater than 90 percent of the total allowable --

MR. HENNEFORTH: Yes. Of the total allowable, well, the total allowable could be --

MR. NAFICY: Total capacity. Total capacity.

MR. HENNEFORTH: On a flow per kilowatt basis the answer would be yes. But on an absolute number the plant would show that it's -- I understand what you're saying. Yes, it would be fairly more water than you would expect for those megawatts, I guess, is what --

MR. NAFICY: Yes.

MR. HENNEFORTH: Okay. Yes.

MR. NAFICY: That's all, thank you.

HEARING OFFICER FAY: Okay, thank you. Ms. Holmes, any redirect?

MS. HOLMES: Just one quick question for Mr. Henneforth. Maybe two.

REDIRECT EXAMINATION

BY MS. HOLMES:

Q Mr. Henneforth, there were some questions asked of you earlier today about whether or not staff had picked a reasonable estimate of

future water use. Do you recollect that discussion?

MR. HENNEFORTH: Yes.

MS. HOLMES: Did staff reach a conclusion that even at the maximum amount of water use, the maximum amount of water that the project could use, that there would not be a significant adverse water impact?

MR. HENNEFORTH: Yes.

MS. HOLMES: Thank you. That's my only question.

HEARING OFFICER FAY: Okay. Any follow up on that? All right. Thank you all. Mr. O'Brien has one last question.

EXAMINATION

BY MR. O'BRIEN:

Q I have a question on the pumps to make sure I understand this, Mr. Henneforth. There are eight pumps, and you seem to imply that in terms of my layman's understanding, you know, if you divide 100 percent by 8, every what, 12.5 percent you need to kick on another pump.

But based upon how you were answering the questions I didn't get the impression that was the case.

I recall that you seemed to imply that the pumps are either on or off. So can you give me a scenario in terms of how the pumps go on as you go from zero to 100 percent capacity?

MR. HENNEFORTH: Yes. It's a little difficult because it's not necessarily limited because of the duct firing. But from zero to full load with no duct firing you'd, on a per-unit basis, and there's four pumps per unit, okay, the pumps would -- I would expect that the pumps would come on when you would reach one-third of 1030 megawatts; two-thirds the second pump would come on; and the third pump would come on when you -- I'm sorry, I probably have that backwards.

The first pump would come on from zero to one-third. The second pump would come on from one-third to two-thirds. And the third pump would come on from two-thirds to baseload without duct firing.

Then when you begin to duct fire you would turn the fourth pump on.

MR. O'BRIEN: Thank you.

CHAIRMAN KEESE: You're saying the come on in sets of two pumps, because I thought we were talking about eight pumps.

MR. HENNEFORTH: That would be a per-unit basis. The same thing would apply to the second unit.

CHAIRMAN KEESE: Okay.

HEARING OFFICER FAY: And now if there's nothing further we'll move to the City's presentation. I'm sorry, was there a question?

MR. ELLISON: I just wanted to consult with my client for a moment about whether we wanted to follow up to those questions, but it's fine.

HEARING OFFICER FAY: Okay. Is the City ready to present its witness?

MR. ELIE: Yes, I'd just like the mobile mike moved down for ease of use. The City calls Jon Rohrer, who has previously been sworn.

DIRECT EXAMINATION

BY MR. ELIE:

Q Mr. Rohrer, would you state and spell your name?

A Jon Rohrer, R-o-h-r-e-r.

Q Mr. Rohrer, would you briefly testify about your background and experience.

A My background is I'm a hydrogeologist with over seven years experience in environmental

consulting. I have worked extensively with cities dealing with contamination of groundwater related to basically protecting water resources and mostly focused on groundwater issues.

I've worked mostly in the State of California and Nevada, and have a masters degree in hydrogeology and a bachelors degree in geology.

Q Is your prefiled testimony, exhibit 174, is that testimony you prepared?

A That is testimony that I prepared, yes.

Q And is it -- do you have any changes to that testimony?

A No changes.

Q Is it true and correct to the best of your knowledge?

A To the best of my knowledge, yes.

Q And are the opinions contained therein your own?

A Yes, they are.

MR. ELIE: For illustrative purposes, to show the Committee a little more closely some of the areas that Mr. Rohrer has testified about in his prefiled testimony, we've taken figure 1-3 from the AFC, and blown up a portion of it, specifically the site so that he can illustrate

what he's talking about for the Committee and see where the wells are we're talking about.

I'd like to give that a number, the blow-up. Anybody who wants to see -- we can also pass out pictures of the actual figure that it comes from. It's just zooming in, basically.

HEARING OFFICER FAY: Yeah, I'd appreciate it if you could pass out copies of that, and can you post it up on the screen?

MR. ELIE: We'll do both.

HEARING OFFICER FAY: Okay. That would be exhibit 190. And what is the title of that?

MR. ELIE: It's a zoom-in of a portion --

HEARING OFFICER FAY: Enlargement.

MR. ELIE: -- an enlargement of a portion of figure 1-3 of the AFC, which is exhibit 4. And what number did you give, Mr. Fay?

HEARING OFFICER FAY: 190.

BY MR. ELIE:

Q Mr. Rohrer, how did you become perhaps more familiar than you'd like with the City's wells near Morro Creek?

A I was employed, my company was employed over a year and a half ago, I believe, working

with the City, associated with the MTBE contamination that came from the Shell Station located east of highway 1 and north of highway 41 on this illustration, up in that corner approximately.

Q At the top right corner?

A The top right corner, correct.

Q And what kind of investigation work did you do in connection with the Shell MTBE problem?

A Generally speaking we were hired to assist the City in understanding the threat that that contamination in groundwater and soil posed to the well field, which I'm going to call the Morro Basin well field, which is located north of Morro Creek, west of highway 1, consisting of four wells that are generally on that figure where Lila Kaiser Park is, which is about 700 feet directly from the station.

And the contamination went from the station west of highway 1, and about 400 feet north of the well field. And it was our job to understand how those wells might be affected.

CHAIRMAN KEESE: Show me where the Shell Station was, again?

MR. ROHRER: The Shell Station is at

this corner here.

BY MR. ELIE:

Q At the corner of highway 41 and Main?

A Yes.

Q Is that correct?

A The northeastern corner of highway 41 and Main, basically.

Q Okay, thank you. You also are familiar with the desalination wells?

A Yes. As part of the City's water supply the desalination wells that supply water to the desalination plant that are located along Embarcadero Road and Coleman Drive. There are seven wells. There are five that are located along basically starting from the entrance to the power plant. And this is in attachment 2, I believe, of my testimony.

There are five wells along the Embarcadero that are developed and have pumps in them, and two along Coleman Drive here. So they are in very close proximity to the actual power plant, the physical power plant.

Q The existing plant?

A The existing plant, and the future plant.

Q Right.

CHAIRMAN KEESE: Excuse me, those are all vertical wells?

MR. ROHRER: Yes, they are --

CHAIRMAN KEESE: At depths of what?

MR. ROHRER: They're vertical wells that are generally screened from -- at that location they're about 10, 15 feet above sea level. The screens for the well where the water enters the well is from about 15 to 65 feet below ground surface.

So from about just a little bit below sea level down to about 55 feet below sea level, approximately. So relatively shallow.

BY MR. ELIE:

Q And are you aware of discussions between the City of Morro Bay and San Luis Obispo about possible use of the desal plant in the near future?

A I am, although I'm not a part of them. I'm aware that the City of Morro Bay recently has been performing testing on those wells to try to get the desalinization plant back into active use. It hasn't been deactivated properly, but there was a period of time that it has not been used.

And part of that is that the City of San Luis Obispo might be looking to enter into an agreement with the City of Morro Bay to put those facilities in a more active use, I believe, by 2005.

Q Where physically, if you know, is the desal plant actually located?

A The desal plant is located on the extension of Atascadero Road over by the sewer plant, generally about there.

Q Over by the joint Morro Bay/Cayucas Sanitary District Wastewater Treatment Plant?

A Correct.

MR. ELIE: Does anyone else have any questions about locations, because I was going to ask him to sit down.

(Pause.)

BY MR. ELIE:

Q Mr. Rohrer, would you briefly summarize your testimony as to the Morro well field and how that might be impacted by MTBE as it relates to this proceed.

A Very brief summary is that part of the analyses performed basically under the Regional Water Quality Control Board and by the potentially

responsible party, Equilon, found that the MTBE could possibly be drawn into the Morro well field if they were to begin pumping.

Those analyses were performed awhile ago, and there is remediation that is ongoing associated with the site.

But at this point the well field is still threatened by MTBE. It s not operating right now because of that threat. But there's hopefully a point that the contamination will be gone. But right now we're uncertain when that will be.

Q Okay, is it accurate that the Regional Water Board proposed remediation level is 5 ppb of MTBE?

A There is not a current remediation level set, but in general on this Regional Board they do use drinking water limits. And the secondary MCL for MTBE, which is the drinking water level set by the Department of Health Services. Maximum contaminant level is MCL. Is what they generally set those limits in groundwater at.

So it's conceivable the remediation would stop at that point.

Q But obviously remediation under the

oversight of the Regional Board?

A That's correct.

Q And what, if anything, has the City taken as a position regarding its zero pollution tolerance policy, as it applies to the MTBE contamination by Shell.

A It's my understanding the City is looking for contamination to clean up the background levels, which in this case would be nondetectable concentrations.

Nondetectable for MTBE is about .5 ppb, whereas that MCL I discussed is 5 ppb. So that would be perhaps much less than what the Regional Board might stop the cleanup at, or offer closure at.

Q And is it accurate that the City's settlement with Equilon last year of the nuisance abatement action left open the issue of the City enforcement of its new zero pollution tolerance policy after the Regional Board might issue closure?

A Yes, there's an agreement to disagree on that point, between the City and Shell.

Q Okay. Please summarize for the Commission your testimony on the potential for

Duke's pumping to interfere with the City's pumping of the Morro well field?

A As laid out in the FSA and in soil and water condition of certification 10, there's discussion of the potential for the pumping that Duke may need to do in order to supply groundwater to the project to impact or interfere with the City's operation of the well field that's located just north of the Morro Creek there.

And in general, the -- in summary for what the testimony I've offered is that we agree with staff's condition of certification with some adjustments. They're primarily related to the fact that the timing, as we've recently discussed, should be before any of the actual activities commence.

I'm not exactly sure on volumes, but as I read portions of the remediation plans and been in remediation discussions, there will be some water required for the actual tank demo.

So the first point would be that the analysis that needs to be performed be performed before that has to occur.

And then the second point that's been discussed is that the five-foot and two-foot

thresholds aren't really based on anything. And that the modeling analysis that's being asked for should actually evaluate what is that threshold, what should that threshold be.

And I think that's about it.

Q Do you have any other direct testimony on proposed changes to the conditions of certification?

A Aside from what's outlined in the testimony, primarily the only remainder is related to there's been, in the proposed changes by Duke there's been a discussion of the reduction of the groundwater by a reduction of the flow by their wells related to whether it's a discernible difference that's due to their pumping.

I haven't seen the groundwater modeling that we've been discussing, but in the groundwater modeling there's a certain degree of uncertainty, in that you're not sure within some of the variables you're trying to model. You're trying to model a complex system.

But whether that will or won't be possible, I'm not sure of technically in a hydrogeologic sense.

Q In other words what we're looking at

here in the groundwater in Morro Bay is not -- that the modeling is not an exact science?

A Correct, the modeling is definitely not an exact science.

Q Okay. Would you briefly tell the Commission about your concerns as to Duke's proposal that it be given the option of providing different water than as opposed to stopping the pumping?

A As we've touched on today, one of the issues associated with soil and water-10 is providing the City, if the Duke pumping, for instance, were to either influence the MTBE plume or to influence the City's ability to pump, one of the options that's written in the COC as it's written right now, says that Duke may provide the City with alternative water.

Providing the City with alternative water, as we have recently found out with the Shell case, is very difficult compared to possibly, and I don't know this for a fact, it came up in today's testimony, providing Duke with alternative water for the resources they're using out of the groundwater.

The prime reason for that is that the

City, to serve water to their constituents, has got to follow the California Department of Health Services guidelines on the quality of the water that's coming to them. And that, by no means, is an easy task.

Whereas the statement in here about potable water was referring to most of what's going to be needed for construction, which I don't believe is drinking water quality, but I don't pretend to know that for sure.

But if it's construction water that has to meet certain chemical standards, but they're not as stringent as the DHS requirements to serve water to citizens.

MR. ELIE: That's the conclusion of Mr. Rohrer's direct testimony. I would move the admission of exhibit 174.

HEARING OFFICER FAY: And exhibit 190, as well?

MR. ELIE: And 190, thank you.

HEARING OFFICER FAY: Okay. Any objection? All right, so moved.

MR. ELIE: Now I'd like to move to rebuttal.

HEARING OFFICER FAY: Oh, all right.

MR. ELIE: With Mr. Rohrer, as well.

HEARING OFFICER FAY: Yes.

BY MR. ELIE:

Q Mr. Rohrer, are you familiar with exhibit 177, which is Duke's prefiled testimony on soil and water resources?

A Yes.

Q Do you have any comment on Duke's proposed changes to soil and water-6?

A I do that's primarily related to discussions that the Commission's already heard regarding waste-3. And generally the very straightforward version that we sort of touched on today, Dr. Greenberg who testified several weeks ago in regard to the basically what exactly it relates to is the private agreement between Duke and PG&E.

The way that COC soil and water-6 is written, Dr. Greenberg previously stated that basically in no event shall the construction that's being discussed occur before the CPM feels that the necessary remediation has been completed.

And that's related to the fact that Duke and PG&E have different responsibilities for the cleanup associated with the existing plant. And

it's just to reiterate that the recommendations that were previously made by staff in waste-3 should be carried through to soil and water-6.

Q Do you also have comments on soil and water-7 that may cross over to soil and water-10?

A Three primary comments related to soil and water-7. The first one touches on something we've touched on before, which is the changing of when actions need to be done whether it's prior to mobilization versus construction.

And on behalf of the City I would feel that it is prudent to make sure that documents are in, or that actions are taken before mobilization versus construction.

The second one we've touched on, also, that on some conditions Duke is asking that the conditions be written so that the Regional Water Quality Control Board, if they have closed the site, then the condition may not apply as stringently or may not apply exactly.

As we've already talked about, the City of Morro Bay has different powers in that regard in terms of LORS. And also if any of that verbiage is to stay in, the verbiage is different across the conditions of certification, the

proposed conditions of certification by Duke. And it should be consistent if it is maintained in any way, shape or form.

But I would agree, at a minimum, it would be Regional Water Quality Board closure if there were any relationship to the Regional Board. And also the City of Morro Bay closure within their zero tolerance policy.

Q Did you have a third comment, or was that two and three combined there?

A No, I had a third one. Sorry.

Q Okay.

A The third comment is that there's a Duke-proposed change to soil and water-7 that meters are not necessary perhaps after the construction phase, into the operation phase.

And just an argument through watching helping cities with water supplies, you don't know what a flow rate is unless you measure it. And I would say that it's probably a good idea to keep the flow meters on there. Maybe decrease the reporting requirements, but you don't know unless you measure something.

Q So you're suggesting that staff's original proposal that the meters be, throughout

the construction phase and beyond would be better?

A That's correct, that the COC, as written, would be correct.

Q Then did you have a comment regarding Duke's proposed change to soil and water-10 concerning the directly attributable language? I think you touched on that a little bit.

A Yeah, as touched on earlier, within the framework of what's being proposed in terms of performing aquifer modeling to understand what the potential interference might be on the City's pumping, and also what the influence on the MTBE plume, it's going to be very difficult to discern within the uncertainty in the groundwater model what that interference might be.

I think identification of the interference would occur and some setting of trigger levels is correct. But trying to back out Duke's own particular interference will be very difficult, and I'm concerned about how technically that would occur in the condition of certification.

Q Do you have any other comments on Duke's proposed changes to the conditions of certification?

A I do not.

MR. ELIE: The witness is available.

HEARING OFFICER FAY: All right, thank you. Mr. Ellison.

CROSS-EXAMINATION

BY MR. ELLISON:

Q Mr. Rohrer, first of all, let me ask you about your concern about Duke having the option assuming that it has to remedy an impact of its pumping on the City's pumping, Duke having the option of providing water to the City, as opposed to reducing its own pumping. You recall that issue, I assume?

A Yes.

Q As I understood your testimony it was based -- your concern is based largely on the fact that the City's requirements for water are, you believe, different than Duke's, is that the basis of your concern?

A The basis of the concern is primarily that the City has to meet California Department of Health Services standards to provide water, which I believe generally, and I don't know Duke's exact requirements, are more stringent in terms of water quality.

Q Would you have an objection to Duke having this option if it were made clear that Duke has to provide water of equivalent quality to that which the City could obtain from its own wells? Equivalent or better.

A Equivalent or better may not be the issue in that it needs to be permitted. It needs to be a permitted source, and that's a very long process with the Department of Health Services.

Q Let me rephrase my question. But for this issue, the City would be obtaining its water from its own wells, correct? That's the baseline assumption we're making here, correct?

A Correct.

Q And the issue is that the City is somehow prevented from doing that, and for the purpose of these questions we're assuming that Duke is the cause of that. And the issue is what's the remedy, correct?

A Correct.

Q If Duke, as a remedy, provides water to the City that is of equivalent or better quality than that which the City could get from its own wells, the City is made whole, correct?

A That's not correct. If it doesn't meet

DHS standards they can't serve it to their citizens.

Q Does the water in the City's wells meet DHS standards?

A It does.

Q Okay. Then if the water that Duke would have to provide would have to be of at least that quality, would it then not meet those standards, as well?

A It may not, because their permitting requirements that are beyond the standards associated with analysis of where the source areas are, and that type of thing.

Q Let me rephrase the question. Would you object to Duke having the option of providing alternative water which meets DHS standards?

A No.

Q Okay. Now I want to ask you about some of these modeling issues. I presume, given your familiarity with groundwater pumping issues in this area that you're aware that Duke uses these wells for the existing project, correct?

A Yes, I understand that.

Q Okay. And I believe the number in the AFC suggests that over the five-year baseline that

we've been using, historic five years, that Duke is pumping something in the neighborhood of 10,000 gpm, does that sound right to you?

A As I understand from reading the AFC, yes. And supporting documents.

Q Is it not true that the City's wells, the levels of water in the City wells can be affected by things other than Duke's pumping?

A That is true.

Q It could be affected by changes in recharge of the aquifer, for example?

A For example, that's true.

Q And it could be affected by the City's own pumping, for example?

A It could be affected by a great number of variables.

Q Okay. And is it not the case that, leaving aside this project, that were that to occur, were there to be a change in the pumping level, in the water level in the City wells, that under current law Duke would not be necessarily held responsible for that, correct?

MR. ELIE: Objection to the extent that calls for a legal conclusion.

MR. ELLISON: Okay, I'll withdraw the

question and rephrase it.

BY MR. ELLISON:

Q What is your understanding of how that problem would be resolved where there was a change in the City's water table and its wells, absent this project, based upon the current pumping that's going on already?

A Can you rephrase it, or not rephrase it, can you restate it again?

Q What is your understanding of how a problem in the water level of the City's wells would be resolved, absent this project, given the pumping that's already going on, including Duke's pumping?

MR. ELIE: Talking local -- what kind of change are you talking about?

MR. ELLISON: A change in the level, water level of the City's wells.

MR. ELIE: One foot, 20 feet, 100 feet?

MR. ELLISON: Enough to cause a significant problem to the City.

MR. ROHRER: Would it be a permitted use or an unpermitted use, is the first question.

MR. ELLISON: Which use are you referring to?

MR. ROHRER: The influence on the City's wells, would it be from a permitted use or an unpermitted use, because that's getting into legal arenas that I'm not an expert in.

BY MR. ELLISON:

Q I'm not assuming that necessarily that we know what the influence is.

A Okay.

Q I'm just asking you to assume there has been a change in the water level of the City's wells that is significant, under the current situation, no new power plant, what is your understanding of how that issue would be resolved among the various people using the aquifer?

A If there was significant change that did not have an identifiable source, I think, and this is speculation in that I don't know, I think that the reason would be identified if possible.

And if it were an unauthorized extraction from the aquifer or a diversion of water upstream, then the City would remedy that by trying to cease whatever that were.

Q Okay. Let's assume that the reason for the water level change is groundwater use affecting the aquifer, all of which is within the

water rights of those using the groundwater.

A Okay.

Q Then what would your understanding be of how that problem would be resolved?

A I don't know that it would be resolved. If the water level changed, if everybody was legally within their rights, and I'm not a water attorney, there would be a water level change that was related to depletion of storage.

Q Okay. Am I correct in my understanding of the City's proposal that if there were a change in the water level that reached whatever trigger level we adopt here, that Duke would be held responsible for that regardless of what might be its actual cause?

A With which COC wording?

Q Under the City's proposal, under your wording, as you would have the conditions.

A All right, so with Staff's COC and with the wording where basically I, in my testimony I proposed to basically eliminate the statement that alternative water would be given to the City.

My proposal, there isn't anything related to that responsibility. I took the existing COC and said --

Q Okay. Then answer the question in that context, under the existing COC. Is that your understanding of how that would operate?

If those trigger levels were reached, Duke would be held responsible regardless of what the actual cause would be.

A Well, I think Duke would have to be actively pumping.

Q Assume that Duke is actively pumping. Let me tell you what I'm trying to get at.

A I understand --

Q I'm not trying to trick you. What I'm trying to get at is you've expressed concerns about the modeling, and I'm not sure what you meant by that.

The reason that we have proposed this modeling, recognizing that it may not be perfect, nonetheless we believe it is the best method for discerning what is the actual cause of a change in the City's water levels.

I've heard you criticize the modeling.

A I didn't criticize the modeling, I criticized modeling --

Q Well, criticize modeling --

A -- modeling has uncertainty in it --

Q Okay, -- I understand.

A It's not criticism, it's --

Q And maybe I got ahead of myself. My assumption was that you were objecting to that change to the condition, the modeling being used to allocate responsibility. Is that a fair summary of your testimony? Are you objecting to modeling being used for that purpose?

A I am currently, not knowing how the modeling will be performed, concerned that modeling the uncertainties in modeling may be too great to be able to determine or discern, for instance, a two-foot change in water level that may be attributable only to the City's -- or, I'm sorry, only to Duke's pumping, given other factors.

Q So your recommendation to the Committee is not to include the modeling language?

A No. Modeling is the way to solve this problem. But whether it's to exactly determine that Duke's the sole responsible portion of that, there may have to be additional monitoring if you want to go that direction as a recommendation. Monitoring closer to Duke's wells that can tell you, absent low flow in the creek, or low flow

through the narrows groundwater recharge, that it is Duke's pumping.

I'm not disagreeing that it is possible to determine that, but you might need some real-time monitoring. You can't just do it with groundwater modeling is what I'm concerned about.

Q Okay, this is helpful. So, let me see if I understand what you're saying is you do not object to some measures to identify what is influencing the City's wells, whether it's Duke or something else, is that correct?

A That's correct.

Q Okay. Your concern is that modeling, in and of itself, may not be sufficient for that purpose?

A Yes, for that particular aspect of what we're talking about.

Q Okay. Do you have a recommendation that would provide you with the requisite comfort, but nonetheless would provide a mechanism for discerning whether Duke should be held responsible, or whether the influence on the City's wells is the City's own pumping or something else?

A This would be obviously open to

discussion with staff, with CEC Staff and Duke consultants, because it needs to be something that's realistically achievable.

But, in similar circumstances like the MTBE plume, there are sentry wells that are located between the plume and the City's wells to determine if, for instance the City turns the wells on, is the MTBE moving towards their wells, that set basically trigger actions in place.

Right now there is no monitoring between Duke's northernmost well and the City's wells that would be able to discern, for instance, if let's say Duke were pumping at whatever level it were, the levels in the AFC, would that be the reason you were getting a water level fluctuation.

You could, for instance, design a monitoring program to understand that. And that might be a recommendation.

MR. ELIE: In all fairness to Mr. Rohrer, I would also indicate that the modeling change was made today to the testimony, as opposed to these equations. So, it's certainly something that I think Mr. Rohrer would be willing to work on with Mr. Mason.

MR. ELLISON: That's fair, I understand.

I'm just trying to get as clear a record as I can as to, you know, what his position is with respect to it.

MR. ELIE: Yes.

MR. ELLISON: That's all I have, thank you.

HEARING OFFICER FAY: Okay. Staff.

MS. HOLMES: I guess a question of counsel first. Do you have a witness who would be available to answer questions with respect to proposed changes to soil and water-11, which has to do with the issue of the CLOMR, or not?

MR. ELIE: I don't, but I can state for the record that the City's position is in concurrence with how staff testified on the issue today.

MS. HOLMES: Thank you, that's all I have.

HEARING OFFICER FAY: Okay. And CAPE.

MR. NAFICY: We don't have any questions on this issue.

HEARING OFFICER FAY: No questions. I see.

MR. ELIE: Can I have a moment?

HEARING OFFICER FAY: Sure.

(Pause.)

MR. ELIE: No further questions.

HEARING OFFICER FAY: Okay. At this time we would like to take a brief break and give the applicant an opportunity to set up materials for its presentation on visual resources.

MR. ELIE: At the risk, Mr. Fay, of stomping in your ground, again, are you going to take public comment after the break?

HEARING OFFICER FAY: Thank you, appreciate that.

Before we take our break we'll ask if there's any public comment on soil and water resources. And Ms. Mendonca has a few cards.

Is Nancy Castle here.

MS. CASTLE: Yes.

HEARING OFFICER FAY: Yes.

MS. CASTLE: Good afternoon, Commissioners. My name is Nancy Castle and I am a resident of Morro Bay. In fact, my property is located directly across from where the tank farm is, basically in that area along Main Street from the underpass to highway 41.

And I have grave concerns about impacts of the project, although I've been doing some

studying and I don't think they're going to be great impacts, but, impacts in general, on the flood plane that is that little swale in there.

Morro Creek, which starts at the top of highway 41 is a very impacted creek. Over the past few decades there's been a lot of work done mostly by the agricultural concerns where debris and dirt has been pushed into the creekbed. And instead of having flood plane areas, most of the creek is a very chiseled shape. It's a very steep bank system. And I have photographs, but in the interests of time I'm not going to show them.

It's my understanding that FEMA has control over flood planes, and that there's a map that was created in 1985 that is the FEMA map that is the establishment of base flood levels. And I recognize that by living in a flood plane I'm accepting a certain amount of risk.

However, it's very concerning to me to realize through looking at various reports and the FSA that the berms that surround the Duke property, the power plant property, are not recorded on that 1985 flood map. They weren't part of the calculations for creating base flood levels for the whole area. And it's going to be

part of what, I gather, the CLOMR, the letter of change is that is going to be requested by Duke and the City.

I'm also concerned about what else is in part of that 1985 flood map, the FEMA map. All of the unpermitted work that's been done on that flood plane up above. If the project changes very much in that area, and particularly if they reinforce the berms so they aren't so potentially pervious, that is what I understand is the consideration now that possibly they aren't part of the flood map because it was considered that in a 100-year flood they'd be wiped out. What impact is that going to have on the whole area.

If, also, there are changes made and FEMA requests additional berms being built, potentially to protect the area that is not now surrounded, the PG&E transmission area, what impact will that have on the whole flood plane. If Willow Creek that spills down, Willow Creek's closer to the underpass than Morro Creek. If it can't go through the Duke property, the PG&E and Duke property, as it does now, it's going to try to go towards Morro Creek and cause the rest of the area to flood more deeply, which is where my

neighborhood is.

There's also the issue of FEMA considers it's law that development, cumulative development can change the flood plane, base flood level by one foot. And the key to me is cumulative.

There's a lot of development that's gone on. There's a permit now being processed through the FEMA process that would take a 3.5 acre field just inside the City limits, right next to the creek, on the other side of the creek from where I live, and fill that in with approximately 18 inches of fill.

All of these impacts mean that the flood plane rises and the risk of being flooded is greater.

In 1995 there was a severe flood in this area. There was 14 inches of water going through my living room. If it's allowed to go up a foot higher, does that mean I have 28 inches or so of water through my living room? And what does that impact to the health and safety of the whole area?

So, as the Commission considers this, and looks at the other agencies that have an influence, you know, be aware that there's all of the variations. There's the known factors of

permitted work in this instance, and there's the unknown factors of that work which isn't on record. And FEMA doesn't know about it.

So, in their analyses, and in everyone's analyses that information isn't available. And so there can be a higher risk for danger to occur.

I appreciate your time. Thanks for coming to Morro Bay.

HEARING OFFICER FAY: Thank you very much for your comment. Are there any other comments on soil and water? Yes, please.

MS. DAVIS: Hi, my name's Mandy Davis. I'm a citizen here. I figured if I didn't wear my pigtails today you might not recognize me. Good luck.

I have a story to tell and this definitely does have to do with water issues. Unfortunately these issues that we've been talking about, the graphs, et cetera, do go over into other areas. So hopefully I'm not overstepping my boundaries by talking about what I'm getting ready to.

I took a statistics class when I was in college, probably one of the best professors I've ever had. The guy was amusing and he had a pretty

good grip on what it was that he was teaching. Once again, he was teaching statistics.

And the very last day of the class he came in and he looked at all of us and he said, consider this class the last four months that you spent taking this class all but useless. And then he proceeded to tell us why.

And this is basically paraphrased what he said. Statistics can be manipulated to suit anyone's need. And the greater the need the more creative the manipulation.

I would like to applaud Duke today with some of their incredibly creative manipulations in the statistics. Hopefully the staff and everyone here can see it for what it was.

I understand what they're trying to do, and they are trying to basically set themselves up for saying that, you know, they're having -- I see him shaking his head -- that they will have less impact on the estuary when it comes time to addressing the biological impacts, because they will be pumping less water through the quote/unquote plant.

And I have a real issue with the way that they're even describing the plant. I

consider it to be a new plant. Even in some of your own literature you have described the plant as, well, here, let me grab it because it kind of sort of grabbed my attention today.

You call the Morro Bay Modernization and Replacement. Anytime somebody terms something as a replacement, to me that indicates that something new is coming in its place. And it says -- replacement, that it is a new plant. And that needs to be considered also when you start considering water usage and the whole issue that's going on here.

Through this whole process I've had a bit of a problem. I'm a big-picture person. And breaking everything down into all the little bits and pieces has been a bit of a problem for me. But I'm trying to pull this all together.

And I got some really interesting information on the internet this afternoon. And I would like to address Duke with some of the information that I got on the internet.

I have an interesting conversation with a fellow that is staff from the CEC. And I asked him if there had been any new applications that had involved the once-through cooling. And he

said that there had not been an application approved of, or even to his knowledge that had been presented to you that had once-through cooling in the application.

And I asked him why that was. And he said because of the impacts. And that those impacts have already been established.

So, obviously the impacts of once-through cooling on the environment have already been historically established by the CEC. And that it's significant impact.

So, given the fact that Duke is struggling to manipulate the statistics to be able to work in their favor, especially with the way that the plant is going to affect the environment, I would like to approach them with this information that I found out today.

This was on the website and this is Duke's own policy, their own mission statements. And I would like to maintain that Duke, at this point in time, with the kind of manipulations they are trying to accomplish here, and what they are preparing to do to our environment.

And as it relates to water, that they are in violation of their own internal policies.

And if they continue to go through with this process, and ask to continue to use the once-through cooling system, they are in violation of those. These are their own policies. This comes right out of their corporation.

"Meeting our customers' demand for reliable and efficient electric service must always be balanced with the protection of our world's natural resources." And then, dot, dot, dot, it goes on to say: "And we help preserve and nurture the environment."

I don't consider this to be preserving and nurturing the environment. And I don't imagine the CEC will find that to be the case, either. It goes on to say this is their responsibility and commitment, this is another policy of Duke's:

"At Duke Energy we strive to be responsible corporate citizens by providing innovative energy solutions that enhance quality of life while taking care of the environment." It goes on to say: "We are an active partner in the journey towards sustainability."

If this is true of what the people at Duke Corporation believe, then it is their

responsibility to withdraw the application immediately. And to do this in the most environmentally responsible way, as relates to water.

And then I got some interesting information about the CEC this afternoon, also. So, understanding that you guys are already aware of the impacts of once-through cooling on the environment in a variety of different ways, I went ahead and I took a look at your mission statement. And this is what it says:

> "It is the California Energy Commission's mission to assess, advocate and act through public/private partnerships to improve energy systems that promote a strong economy and a healthy environment." Once again with the vision statement: "It is the vision of the California Energy Commission for Californians to have energy choices that are affordable, reliable, diverse, safe and environmentally responsible."

So, given those two mission statements and the policies of both the CEC and Duke, I found it incredible that you guys would even begin to consider ratifying the application, Duke's

application, as it is with the once-through cooling system.

There's one other thing that I was reading about the purposes of the Commission's siting process. And this is very specific to what we're doing right here. That is to insure that reliable supply of electrical energy is maintained at a level consistent with the need, which still needs to be, you know, shown here, for such energy; for protection of the public health and safety; and for promotion of the general welfare and for environmental protection.

Once again, you guys have already found that once-through cooling and the water system these guys are looking to continue to use is not that. It has been your history, you have found that to be the case. So I'm asking you to not allow Duke to continue to use the once-through cooling system.

Thank you.

HEARING OFFICER FAY: Okay, thank you. I understand Debra Johnson from the Department of Fish and Game is here and wants to make some comments, as well.

MS. JOHNSTON: Thank you. Chair Keese,

Commission Members, my name is Debra Johnston representing the Department of Fish and Game. And we have reviewed the staff assessment, and there's a couple comments that I would like to read in.

In regards to soil and water number 1 and 2, since they have vegetation components for the erosion and sediment control and stormwater management plans, we would like to add that the Department of Fish and Game be added as a reviewing agency, especially in light that we are the state trustee.

In soil and water number 4, the revision has the wording significant in it. It states: The applicant must implement measures to assure that Morro Creek will not be significantly impacted by sedimentation or erosion resulting from construction activities associated with the bridge crossing of the creek.

If measures show that sedimentation is occurring, it's already impacting. Therefore significant does not need to be there. They should be doing correcting measures immediately.

Soil and water number 6 and 7 with the new numbering, we would again ask that Department of Fish and Game be added to the reviewing. This

is similar to our responsibilities that you just recently permitted for the Moss Landing Power Plant.

Soil and water number 12, if berms are needed in the rehabilitation, which it sounds from the discussion that this probably will not happen, we would recommend that the Department review the plans, and also Fish and Wildlife Service to determine the potential for impacts to flora and fauna.

It would probably also be pertinent for Duke to send letters to the Department requiring verification that a 1603 permit is or is not needed for the crossings of both Morro Creek and Willow Camp Creek.

And we had requested that in the LORS section that Fish and Game code section 5650 be included. We are asking this because Fish and Game code 5650 is much more stringent than those requirements of the Clean Water Act. The Clean Water Act only permits and has requirements for point source discharges and certain nonpoint source discharges. The Department code applies to all discharges.

In addition, the Clean Water Act does

not protect the most sensitive 5 percent of organisms. The Department of Fish and Game protects all organisms. So therefore we'd recommend in the LORS that Fish and Game code be noticed in there.

Within the document, page 4-7, a minor correction. Salinity is measured in parts per thousand, not parts per trillion.

Page 4-9, it seems that a section on Willow Camp Creek should be there since they do address Morro Creek.

We would like to add that the fresh water wells be monitored, and that if there is a change in drawdown and potential recharge from surface water, then we would see if there's a possible correlation between the withdrawal that Duke is proposing during the construction time with the increased withdrawal.

Page 4-14, we would request that no stormwater discharge go to Willow Creek Camp, as it's currently noticed.

Page 4-22, we recommended that no trenching of Willow Camp Creek occur. We do agree with the applicant's position for directional drilling. If the Commission does decide that

trenching is the preferred option, that the width for the trench and the spoils storage area be reduced to a 15-foot maximum, if feasible.

And then also the temporary footbridge, that the clearing should be no more than a ten-foot maximum width.

In the introduction of the section it states that the analysis focuses on the potential for the project construction or operation to impact surface water supply or quality, including ocean waters. But there is no section describing the potential pollutions impacts to Morro Creek from the bridge crossing and its associated long-term use, should it be allowed to be a permanent feature.

Thank you.

HEARING OFFICER FAY: Thank you. Can you provide those comments in writing to our record?

MS. JOHNSTON: Sure.

HEARING OFFICER FAY: And --

CHAIRMAN KEESE: Had you submitted those previously to staff?

MS. JOHNSTON: Yes, the June 25th letter has them. And I'm just clarifying in more

specifics to what has been brought out in the final.

CHAIRMAN KEESE: Thank you.

HEARING OFFICER FAY: Okay, thank you. All right, any other comments on soil and water? All right.

MR. CHIA: Mr. Fay, I have a few comments.

HEARING OFFICER FAY: I'm sorry, what?

MR. CHIA: I have a few comments, Mr. Fay. This is Dan Chia with the Coastal Commission. Will that be okay?

HEARING OFFICER FAY: Sure. Go ahead, Mr. Chia.

MR. CHIA: Okay. We had forwarded or I had forwarded some comments that our water quality staff made on three of the stormwater pollution prevention plans. This was on December 27th of last year.

I realize that it was after the publication date of the FSA part two. But I didn't see responses to those comments in the errata revision of March 5th. And I'm wondering if those were even made to the right people.

MS. HOLMES: Staff received the letter

from the Coastal Commission, and if you want Mr. Crea can respond to the Coastal Commission's concerns.

MR. CREA: Good afternoon, Dan.

MR. CHIA: Good afternoon.

MR. CREA: I believe we spoke shortly after this letter came out with regards to your comments. And I'd like to thank you for your comments; they're very detailed and specific. And staff will incorporate them as part of their compliance review.

These comments are extremely technical and are beyond the licensing scope. So, in essence, we will make sure that we incorporate these comments within our technical review during the compliance phase of the project.

HEARING OFFICER FAY: So the comments have been docketed?

MR. CHIA: I cannot confirm that. I'll double check, and if not, --

MS. HOLMES: The copy that I received from Mr. Crea yesterday doesn't have a docket stamp on it. Another point that I'd make is that the types of comments that are made in the letter from the Coastal Commission, they address the

kinds of things that staff typically does include. So they're not new issues, they're not issues that are outside the scope of what we typically consider. It's just the timing question. We typically address these kinds of issues in compliance, not in the licensing.

HEARING OFFICER FAY: Notwithstanding that, I'd ask staff to please be sure that that gets docketed.

MS. HOLMES: We'll do that.

MR. CHIA: Thank you.

HEARING OFFICER FAY: Anything further, Mr. Chia?

MR. CHIA: Just another, one other thing in soil and water-1, we would request, because we have -- typically we would have permitting jurisdiction over certain portions of the project, including the construction access road and the bridge, we request that we be the -- agency for the final stormwater pollution prevention plans.

HEARING OFFICER FAY: We're having trouble hearing you. If you could speak up, please?

MR. CHIA: Okay, can you hear me now?

HEARING OFFICER FAY: Yes.

MR. CHIA: Okay. What I said was typically the Coastal Commission would have coastal permitting jurisdiction over portions of the project including the construction access road and the location of the bridge. And therefore we would request in soil and water-1 that we be the reviewing and commenting agency for the final stormwater pollution prevention plans.

Does staff have any objections to that?

MS. HOLMES: No.

MR. CHIA: Okay. Thank you, that's all I have.

CHAIRMAN KEESE: The answer was no.

MR. CHIA: Thank you.

HEARING OFFICER FAY: Anything further?

MR. CHIA: No, thank you.

HEARING OFFICER FAY: Okay. Thanks very much. Then at this time we are going to take a ten-minute break and give the applicant a chance to set up any visuals they have.

And we will conclude no later than 6:00 tonight. And resume tomorrow morning with visual resources, and then our scheduling conference.

(Brief recess.)

HEARING OFFICER FAY: Will the court

reporter please swear the applicant's witnesses on visual resources.

Whereupon,

DAVID BLAU, RUSSELL POQUETTE, JEFF FERBER and PAUL CURFMAN

were called as witness herein, and after first having been duly sworn, were examined and testified as follows:

MR. ELLISON: Thank you. The applicant's lead witness on visual resources is Mr. David Blau, sitting to my right. Supporting witnesses are Mr. Paul Curfman and Mr. Jeff Ferber and Mr. Russell Poquette.

First of all, can I have marked for identification the visual resources testimony?

HEARING OFFICER FAY: I'm just checking the list to see if we haven't included that on the list you submitted. Apparently not. That will be exhibit 190, Duke's testimony -- 191, rather.

MR. ELLISON: Thank you.

DIRECT EXAMINATION

BY MR. ELLISON:

Q Mr. Blau, do you have a copy of exhibit 191 before you?

MR. BLAU: Yes, I do.

MR. ELLISON: And was this prepared by you or at your direction?

MR. BLAU: Yes, it was.

MR. ELLISON: Does this testimony include the qualifications of the members of the panel?

MR. BLAU: Yes, it does.

MR. ELLISON: Oh, I'm sorry, before we go any further, starting with you, Mr. Blau, and remaining members of the panel, can I ask each of you to state and spell your name for the record please.

MR. BLAU: Yes. David Blau, B-l-a-u.

MR. POQUETTE: Russell Poquette, P-o-q-u-e-t-t-e.

MR. FERBER: Jeff Ferber, F-e-r-b-e-r.

MR. CURFMAN: Paul Curfman, C-u-r-f-m-a-n.

MR. ELLISON: Okay, thank you. Returning to exhibit 191, Mr. Blau, does exhibit 191 include the qualifications of all of the members of the panel?

MR. BLAU: Yes.

MR. ELLISON: Could you please summarize your qualifications, and then I'd like each member

of the panel to briefly summarize their qualifications.

MR. BLAU: I have about 30 years experience in the profession. My education was a bachelors in landscape architecture, a masters in urban planning.

I have worked on a wide range of environmental impact analyses and visual impact studies for all that time, facilities including power plants, reservoirs, highways and transmission lines, et cetera.

I've also done quite a bit of work over the years with scenic resource assessment for agencies like the Forest Service, the Bureau of Land Management, the Bureau of Reclamation, the Tahoe Regional Planning Agency.

MR. POQUETTE: Russ Poquette. I've got over 27 years of experience in the execution of engineering procurement and construction projects. I work for Duke FluorDaniel, and am the Project Director for the Morro Bay project.

MR. FERBER: Jeff Ferber. I'm a Principal at RRM Design Group, and the Director of Planning and Landscape Architecture. I'm a registered landscape architect in California.

Most of my experience is in coastal California on land planning and landscape architecture projects.

On this project my specific role has been the assistance of the visual resources preparation. And specifically regarding local knowledge of climatic conditions and landscape architectural issues for offsite improvements and public facilities.

MR. CURFMAN: I'm Paul Curfman. I've got over 20 years experience in landscape architectural professional. My degree is in landscape architecture from the University of Oregon.

I've been working with EDAW on visual assessment for power plants and transmission lines for the last three years. And have done previous work with highway siting.

MR. ELLISON: Thank you. Mr. Blau, do you have any additions, corrections or clarifications you'd like to make to exhibit 191?

MR. BLAU: I do, just a couple here. On page 17 of my testimony we need to delete landscape zone H. Landscape zone H was a treatment of trimming the eucalyptus trees to

improve the view from one key observation point which you'll see a little later in my testimony. And because of the butterfly habitat issues, we're not proposing to do that treatment. So that's why that zone would be deleted.

And then also on page 38, this is dealing with the exhibits that are referred to. Exhibit 162 should read exhibit 47. And on page 39 there are three exhibits that we've listed here that all deal with the cooling options, and we understand those should be deleted from this particular testimony. That would be exhibits 107, 167 and 168.

MR. ELLISON: With those changes are the facts contained in this testimony true and correct to the best of your knowledge?

MR. BLAU: Yes.

MR. ELLISON: And are the opinions contained in the testimony, do they represent the best professional judgment of you and the members of the panel?

MR. BLAU: Yes.

MR. ELLISON: Do you and the members of the panel adopt this testimony as your testimony in this proceeding?

MR. BLAU: Yes, we do.

MR. ELLISON: Mr. Blau, since we're talking about visual resources, I know you've got a lot of pictures associated with this testimony, all of which are in the testimony or documents that are incorporated by reference within the testimony. There's nothing new here.

But I think it would be helpful to everybody's understanding to do this primarily with visuals. So I'm going to ask Mr. Blau to present a sort of PowerPoint presentation in response to these questions.

I do want to remind you, Mr. Blau, however, that this being done by transcript, and so you do need to describe what you're looking at, because the transcript can't reflect that. And we also have Mr. Chia by phone, so you need to describe what you're pointing to as best you can for his benefit, as well.

With that, let me ask you, how did you go about analyzing the visual resource issues associated with this project?

MR. BLAU: Okay, let me talk a little about approach and methodology. Let me just be more specific about what you'll see. Everything

that I'm showing is in the record. And it's in one of five sources. Either it's part of the AFC, exhibit 4; some of my slides are from exhibit 30, which was the April 4th community workshop on visual; some of the slides are from exhibit 164, which was the November 5th community workshop; and then also I have some slides from exhibit 166, which is our comments on the enclosure analysis. And then fifth would be directly out of my written testimony.

HEARING OFFICER FAY: Mr. Blau, if you can, when you refer to a particular plate, if you could also reference it in terms of the exhibits, that would also help, too, if possible.

MR. BLAU: Each image all the way through?

HEARING OFFICER FAY: If you possibly can, because, again, later when some of us are looking at the transcript, it might otherwise be hard to know where we can find that picture.

MR. BLAU: All right, I can do that.

The first --

MS. CHURNEY: If I could just clarify, when he says that all of this is in the record, that means it's been docketed and served on the

parties, is that correct?

MR. ELLISON: That is correct. And it's contained either in the direct testimony or in the exhibits that are incorporated by reference expressly in the testimony, all of which have been docketed and served.

MS. CHURNEY: Thank you.

MR. BLAU: The first image is from exhibit 4 of the AFC, page 6.13-13. And I show this just to kind of illustrate the unique visual setting that we talk about in our visual work in the AFC. The fact that we have a town, we have the rock, we have the power plant, and they have existed in relationship here for just under 50 years, which makes a very unique approach to the way you do the visual work.

The nine-step methodology is in exhibit 4, the AFC, as well, on page 4. Because we are modifying an existing industrial site, i.e., we're taking elements out, we're adding other elements, it calls for a very specific approach, we think, in terms of the visual methodology.

And the CEC visual assessment methodology which is contained in the guidelines in appendix B, I've always felt is better suited

to looking at man-made features placed in a natural setting And that certainly was the derivative of much of the vocabulary in that methodology.

It doesn't help very much in terms of dealing with the types of changes that are occurring in an existing industrial landscape. So we've taken an approach that I think is very direct and deals with all of the components of that visual change.

I put on the screen here the nine-step methodology that we used, which begins by understanding and taking apart the existing visual setting. Analyzing and describing the existing power plant and all its associated features. Then conducting an overall viewshed analysis which does a sweep from the project site, and looks with a terrain model at what is likely to be views from those locations to the site.

We then studied the proposed modifications in the new project, and a very key step, number five, is selecting the key observation points. And I will explain those shortly.

Then we analyze what we're seeing from

each KOP, and then we loop back and that influences the site, the engineering design, and engineering thinking about the project.

From that loop we then ultimately assess the overall degree of change, examining all 20 in this case, 20 KOPs, and make a determination as to the overall significance of the visual change. And then recommend any mitigation measures if that is appropriate.

We begin by looking at the overall landscape. This is from exhibit 4 of the AFC, page 11. We document the existing landscape character, and that forms the basis for the visual analysis.

This is derivative of BLM visual analysis system developed many years ago; and it's very useful in terms of establishing the context and the setting for the analysis.

In this particular case we characterize the landscape into eight distinct units looking at landform and terrain, water, vegetation and development patterns.

And because there's so many different neighborhoods, there's 15 different neighborhoods that we looked at separately under the developed

category, and described their particular character and views.

The next slide shows the viewshed analysis. This is from exhibit 4, from the AFC page 53. This is a very important image. You can see radii that go out five miles from the proposed site.

And what we do here is we take a terrain model that does ignore structures and trees or vegetation. It's just a model of the land. And we do a sweep from the height of both the existing stacks and the proposed new stacks. And from that sweep we can plot in the colors up here where the potential views are of both the existing stacks and the new stacks.

And what this graphic shows in green, the green color represents all the areas where the new stacks which are proposed to be 145 feet high, plus the existing stacks would be likely seen.

The yellow are the areas where the viewer will most likely only see the existing stacks, the 450-foot existing stacks. In other words, when those stacks come down, anyone in that yellow zone benefits by not seeing those existing stacks any longer, but they also can't see the new

stacks.

We call this the maximum area potential visual benefit. It's the green plus the yellow. And just to give some numbers to this, in the 1990 census it was estimated that there were 25,000 people that lived within a five-mile radius of the site, 25,000 people.

In terms of people who are motorists, 1997 data showed about 26,400 motorists a day that are using highway 1, highway 41 and other major roads within that same five-mile radius to give you some idea of the numbers of folks that would be experiencing these types of views.

Now, the selection of the KOPs, the next slide, is in exhibit 4 of the AFC. This is page 74. Again, you can see several radii; there's a half-mile, there's a mile, 1.5 and two miles. What we found after doing visual observations is after you move out beyond two miles being able to detect the power plant, the new power plant in the view was very very difficult.

So we focused our selection of KOPs in this zone. Now, I want to emphasize that what we're doing here is we're selecting a set of key observation points that are a model or surrogate

for the real world. So, it's very important to us that they all be examined when you draw conclusions about visual change and visual impact.

The next slide shows the history of selection of these points. This is in the AFC, and it's summarized on pages 62 through 65. We started initially working with the City with 82 potential key observation points. It was a very thorough process. We screened those down, trying to identify all sensitive viewpoints and a good range of close-in, mid-range and long-distance views.

We worked with the City, with the Energy Commission. It was Gary Walker at the time was the staff representative in the field with us. And we ended up agreeing on 19 KOPs.

We then added, in June of '99, we added a 20th to represent the new scenic highway status along highway 1.

Now, what are we interested in for each KOP? This is exhibit 4, pages 68 through 73. For each KOP we collect some factual data dealing with its precise location, a description. We characterize the types of viewers in three categories, residential, recreation or mobile.

And then we look at a number of factors including the field of view; the area of change in that view; how much contrast we have, in other words blockage of skyline, of ocean, of rock. And also comment on design improvements from those views.

We build a wireframe model, as it's called, in the computer. This can be found in exhibit 30, PowerPoint slide number 17. This is a three-dimensional model which forms the basis for all of the photo-realistic simulations that we do. It's registered very accurately because in this case we built the model with the existing power plant and stacks, and the new plant in the same model.

A lot of times when you're placing features in the landscape you don't have that kind of benchmark. But in this case we could register very accurately from any point because we could always match the existing turbine building and the existing stacks.

The actual process that goes from this wireframe to the finished simulation is described in attachment 2, page 207 of the AFC. And I won't go into that today unless asked.

Now, what do we measure when we look at each of these KOPs? This is from exhibit 4, page 71. First of all you see a panorama on the screen. It's our strong feeling that in this study that a panorama captures the view experience more than just an isolated frame in the view.

There are very few views that we're showing that are experienced in effect with tunnel vision. You're looking at a much broader view. This view represents somewhere between 100 and 110 degrees of view.

We look at a number of factors here. Horizontal, -- if you could point that out -- on the top is existing condition; on the bottom is always proposed. But horizontals, how much of that total view is encompassed by the existing power plant versus the proposed at the bottom. Very important as to how much of that view is changing.

So we measure that. We measure that in degrees, in degrees of the whole view. We also look at the area occupied by the power plant, and it is very easy these days to do take-offs right off the computer that measure in square millimeters how much power plant is changing in

mass; how much is moved away from hiding the rock, the ocean and so forth.

So, all these were measured very accurately, provided on the KOP sheets. And these are then taken into consideration as we draw our conclusions about visual change.

MR. ELLISON: Can you describe, Mr. Blau, what features were incorporated into Duke's project design that were intended to minimize the visual effect of the projects?

MR. BLAU: The next slide is in exhibit 164, and it's PowerPoint slide 20. This is a summary that we used at the workshop, the community workshop, to talk about the effect that we've had in modifying the finding, the proposal from the visual standpoint.

The removal of the existing power plant and stacks obviously is a very significant improvement. The removal of the tank farm. Throughout our work we have heard from the community, expressed a number of times, and also summarized in our testimony, that we are to try to minimize the height and bulk of the new power plant. And we agree with that, and have attempted to do that throughout.

We also studied orientation of the new units with different configurations on the site. We did studies of the pipe rack locations, of the color treatment of the perimeter wall of the water intake structure, of the pedestrian bike bridge, and the landscaping plan. And let me quickly run through some of these.

This image is in exhibit 164, it's PowerPoint slide 21. Just an illustration from downtown of the positive change when that existing power plant is removed.

The next slide is exhibit 164, PowerPoint slide 22. The tank farm includes five tanks; they're 200 feet in diameter; they're 32 feet high. And the removal of this tank farm also is a very significant positive visual action.

Minimizing height involved. This is in exhibit 164, PowerPoint slide 23. We're interested in removing any obstructions of the rock and the beach views. Allowing the hillside residences to look through the project, if you will, towards the ocean and the beach.

Some of the site equipment is housed ready, so when we get into partial enclosure we'll talk more about that later. But the turbine

buildings, the four gas turbines, the two steam turbines, are, in fact, being proposed to be enclosed.

And then the fourth point is minimizing the bulk, reduce the stack height. There is a relationship between the power plant buildings and the stack height, and in every case we've used the objective of trying to minimize stack height.

We looked at a variety of configurations on the site. This is from exhibit 164, PowerPoint slide 24. We looked at across the bottom of this slide -- Paul, if you could just maybe point those out with the pointer -- we looked at placing the units all in a row, which would be parallel to the coastline.

We looked at clustering them and putting them at right angles. And then the preferred choice was the footprint that clustered all four stacks as tightly together as we could.

Relative to the pipe rack, this would be exhibit 164, PowerPoint slide 25, we did some studies of different configurations working with the project engineers. And the lower left is the recommended, which has a central spine of piping which is actually lower than the HRSGs on either

side. It does simplify the overall appearance somewhat.

And then moving on to color, this would be exhibit 164, PowerPoint slide 45. We've had a number of workshops in the community, open houses and interactive workshops to collect input. Two of the more significant events were on November 5th, the workshop we held; and then on November 13th, the City's public hearing. Color was one of five items that were dealt with in both those events.

And the City, in their resolution, the City passed the resolution, it's number 72-01, on November 13th, and they stated a preference for the green tones, because they felt they worked best with the vegetation that would be provided.

Let me quickly just go through, let's see, number 19 is blue; yeah, this just so I can point these out, 19 is exhibit 164, PowerPoint slide 46 showing the blue tones. And we saw the beige first. And then on the green. Okay, this is exhibit 164, PowerPoint slide 47. This shows the green. So this is what the community reacted to and is steering us in this direction.

The next subject is water intake

building. This is exhibit 164, PowerPoint slide 36. There's been a lot of work done on the water intake building. For a time we were working towards changing the facade so the building fit much more into kind of a waterfront motif. We studied various ways to peak the roof.

And at the workshop when the community saw those conceptual designs, their feeling was don't raise the roof. They did visit the structure and saw the cranes inside and the space they need to operate, so they understood why the building was the size that it is.

And so the current work right now with the City is really to just clean up and repaint the building, a new walkway and some landscaping would be provided. The parking would be reconfigured. And there would be a small seating area. So that's where we stand right now on the water intake building.

The landscape objective. This is exhibit 166, I don't have the page number on this one, unfortunately. Four fundamental objectives in landscaping of the project. Obviously we want to enhance the appearance of the project.

We want to support natural landscape

functions. What that means is there are two very sensitive habitats that we need to be very conscious of, the escha (phonetic) along Morro Creek and the dune habitat. We want to use native plants for a number of reasons. We want to conserve water. The City, throughout the process, has been conscious of the amount of water that we would need if we moved away from non-natives. And also insure that we stabilize the dune and scrub habitat as well.

So, we have a number of site constraints to work with. This is from exhibit 30, PowerPoint slide 46. You can see the escha -- can you point that out, Paul -- which is quite a constraint in terms of landscaping. If you point out the area between the power plant berm and the escha there, keep that in mind when we start looking at some of the KOPs, because we have a very limited area to plant vegetation in that zone.

The landscape concepts, if you go to the next slide, 25, this is from exhibit 30, PowerPoint slide 47. Everything seems to revolve around two what could be viewed as very different approaches. One is screen as much as possible with big plant materials, big trees, fast-growing

materials. And the other theme is use native materials that are much lower to the ground, slow growing, drought tolerant.

And so through the workshops we've come up with a current set that really finds places or zones for each of these. And there's been a lot of community involvement in this subject.

Let me show you the landscape concept plan; it's divided into zones. H is the one that we eliminated that was the eucalyptus trimming zone. But basically we're proposing to screen on the north and south perimeters, we are proposing low dune vegetation on the west. And in front of the existing power plant we'd be planting a lot of plant material with a lot of color.

The pedestrian bike path is also shown in this landscape plan. The bridge, pedestrian bike bridge is shown there. And we could point out the Den Dulk property also, which would be part of the dune restoration area.

The next slide is from exhibit 164, PowerPoint slide 50. This just shows you some of the plant palate that is suggested. We actually have the AFC plant palate for each zone. Some of the materials like the ironwood in the lower left

and the seanofis (phonetic) are actually depicted in the simulations that you see.

Now, we did some simulations to explore the vegetation. This is from exhibit 164, PowerPoint slide 51. This shows very low growing natives on the westerly berm. It certainly respects the escha. You would get color, and it would add to the dune habitat west of the power plant.

I may also point out on this, this simulation is a good representation of the perimeter wall. The wall would be 20 feet high, approximately 1000 feet in length. The existing power plant wall, just for reference, is 12 feet high.

The community, in their resolution, we showed them different designs for the wall. They preferred a wall architectural treatment that mimicked the existing wall. So that's what we would do there.

Dune vegetation. Let's go to the next exhibit 164, PowerPoint slide 52. This one shows larger materials, less native materials, some large box trees would be planted for early year effect. And smaller trees planted for long-term

viability.

The issue we have is that the conditions are so harsh that if we go with very large materials we're going to lose a very high percentage of those, most likely due to the winds and the salts. And so we really feel that the wise thing to do is to mix up the palate so that we have a better chance of survival.

And then we explored one other option; this is also from exhibit 164, would be PowerPoint slide 53, I think. And that was a row of large palm trees where we get some higher growth along the edge. It doesn't block ocean views. These would be planted along Embarcadero north of the creek, hopefully on City land, as well.

In this depiction they're spaced 100 feet on center, 35 feet high. They could reach as high as 75 to 100 feet.

So the City, in their resolution, said they want extensive and substantial screening. And we think with a combination of these I think we are hopefully meeting the intent.

MR. ELLISON: Mr. Blau, as I understand your method you first made findings with respect to each of the 20 KOPs, and then you made an

overall finding based upon the sum of the individual findings at the KOPs, is that correct?

MR. BLAU: That's correct.

MR. ELLISON: Can you very quickly walk us through your findings at each of the 20 KOPs and what the basis for that finding was?

MR. BLAU: This slide is from exhibit 30, PowerPoint slide 21. What we did from each KOP is we drew a conclusion as to whether that change is positive, in other words, an improvement to the visual scene. Neutral. Or negative, we're actually degrading in some way the existing scene.

So, as I go through these we'll show the conclusion for each of the KOPs.

Okay, this is KOP-1, this is from exhibit 4, page 81. This is from the top of Black Mountain; we're about 1.8 miles from the power plant site; we're southeast of the site.

In every case, as we run through these, the existing is on top, and the proposed is on the bottom.

You can see, I think, pretty clearly that when we remove the existing stacks it's very hard in that view, which is just under two miles, to detect the new power plant from that view.

KOP-2 is --

MR. ELLISON: I'm sorry, Mr. Blau, but just for the record can you state what your conclusion was with respect to --

MR. BLAU: Oh, I'm sorry, --

MR. ELLISON: -- each one of these and I know it was on the slide, but the transcript doesn't pick it up.

MR. BLAU: Right. The conclusion on KOP-1 was a positive visual change.

On KOP-2 we are exhibit 4, page 85, we're at Morro Strand State Beach entrance. This is a little over two miles from the project site. We're north of the site, looking south. You can see here again the existing power plant up top would be eliminated. The new power plant is barely visible here, and we drew a positive visual change conclusion here.

KOP-3 is in exhibit 4, page 89. We're along highway 1 near the Cloisters development, 1.3 miles from the site. This is a view that was picked to represent an auto-oriented view. The existing power plant stacks break the horizon. The new power plant is below the horizon. That's pretty significant when you're not skylighting

above the horizon line, you tend to lose the proposed feature easier in the view. And that conclusion, as well, KOP-3, was positive visual change.

KOP-4 is in exhibit 4, page 93, we're from the Cloisters development public park here. We're slightly less than a mile away. Actually there are new homes that have been built since we took these photos that would block, totally block the view towards the site. But if it looked like this, there's the new power plant versus the existing on top. Also a positive visual change.

The next one, KOP-5, is from exhibit 4, page 97. We're at Morro Strand State Beach here. We're four-tenths of a mile from the site. Here's a case where when the existing plant goes down and the new plant goes in, the new plant is closer to the viewer and we did draw a negative visual change conclusion on this KOP.

Exhibit 4, page 105, is KOP-6. This is from the Morro Dune Trailer Park. We are very very close to the new site. We're 1000 feet from the new power plant here. We have, again, in the spirit of trying to be very accurate, we showed the trees that are being planted on that northern

edge, less than full height. We're trying to be realistic about growth of the plant materials. But we do have the power plant much closer than the old plant that would be taken down, and we drew a negative visual change conclusion from this view.

KOP-7 is exhibit 4, page 105. This is south of Morro Creek along Embarcadero Road. We're again about 1000 feet from the site. The fuel tanks are gone. The existing power plant and the stacks, which are quite large, are gone. And the new power plant is shown. The zone of view in degrees is also much narrower if you look between the top and the lower view. We drew a neutral score for this one because of the balance in the change with the tank farm and the existing power plant coming out.

KOP-8, exhibit 4, page 113. We are now across the inlet from the rock on Coleman Drive. We're a little less than a half a mile from the project site. We have a major improvement here with the existing plant coming out. Point that out, Paul. And then down below you see the new plant, the stacks are below the horizon line. You might point out the water intake building just

while we're on this, to the left there. And the conclusion here is a positive visual change.

The next one is KOP-9, exhibit 4, page 113. We're on the north T pier. We're a little over 1000 feet from the project. If we could go up and out with this photo, you would see the full extent of that existing power plant looming over the person standing at this place. This is a case where framing that view doesn't do justice to what you really feel when you're out there.

But if we could point out the new power plant. You can pick it out if you know what it is. If you move slightly north on this pier you don't see it at all. So, the conclusion here is also a very positive change.

KOP-10 is from exhibit 4, page 117. Now we're over on Scott Drive, south of the site. We're 1900 feet from the project. Again, we have a major improvement. Here we might point out we removed the eucalyptus. You can see it in the top photo there. And that's what we are not proposing to do at this point. So that would stay. That was done because at some of the community meetings the residents asked if we could unblock the view to the rock.

Okay, KOP-11 is exhibit 4, page 121. This is from highway 41, the gateway from the east. We're a little over a mile from the site. It's one of the points where you first see the existing power plant. Obviously when that's removed -- Paul, point out the new power plant right there at the base of the rock. Again, we drew a very positive conclusion from this viewpoint.

KOP-12 is exhibit 4, page 125. We're on highway 41 again. It's an important entrance to the City. We're about three-quarters of a mile from the site. This was another viewpoint suggested by the City as the past KOP-11 was. And, again, a very positive change with the removal of the existing plant and stacks.

KOP-13 is exhibit 4, page 129. Now we're going to move to a series of hillside residential views. This is Morro Del Mar subdivision tracts 1 and 2 represented here. We're a little over a mile from the power plant. There's no question that the panoramic views are enhanced with the proposed action. The new power plant is below the skyline, no longer silhouetted. And the rock really dominates the view, where

right now the rock and the power plant kind of compete for your attention in the view. The conclusion is positive for KOP-13.

KOP-14 is exhibit 4, page 133. This is from the Sunset Plateau neighborhood. We're a little over a half a mile from the site. Very similar to 13. We have requests from residents that we simulate views from almost every block, so bear with us here. We have quite a few views.

Again, the panoramic views are enhanced. The rock emerges and dominates in this view. The conclusion is positive.

KOP-15 is exhibit 4, page 137. We're at Harbor Front tract here in this view. We're a little over a half a mile from the site. Again, a major improvement. This is a neighborhood where the existing power plant is removed, and views of the rock are opened up dramatically from this neighborhood. Positive conclusion on this one.

KOP-16 is exhibit 4, page 141. Now here we move northbound on highway 1 at Morro Bay Boulevard exit. We're a little over a mile from the site. You can see the existing stacks in the top photo right there. And you can barely pick out the new power plant in the vegetation in the

post-project condition in the bottom. Overall positive change.

KOP-17 is exhibit 4, page 145. We're now at Morro Heights neighborhood. We're a little over a mile from the site. We get filtered views of the site through the trees here. Again, the existing stacks are silhouetted against the skyline. The new power plant is far less detectable and well below the horizon line. Positive visual change here.

Bear with me, only have three more to go. KOP-18 is exhibit 4, page 149. This is from the public dock at the Tidelands Park. We're about a mile from the site. Another viewpoint the City wanted to see modeled. Another major visual improvement from downtown. The new stacks are only partially visible in this view. A positive conclusion.

KOP-19 is exhibit 4, page 153. This is from the steps above the Chessboard downtown. We're six-tenths of a mile from the site. And this is, you can characterize as a tourist viewpoint. Much improved with the existing stacks removed, the new stacks are barely visible there above the building. Positive visual change.

And then the last KOP is exhibit 4, page 157, KOP-20. This is from highway 1, as well, at the Main Street onramp. It's actually the closest point along highway 1 to the project. We're about 1600 feet. We're looking across the PG&E property here. Vegetation does form an effective screen here. And we concluded another definite positive visual change here.

MR. ELLISON: Okay, thank you. And you've selected these KOPs in consultation with the staff, isn't that correct?

MR. BLAU: That's correct.

MR. ELLISON: Could you describe, Mr. Blau, how you translated these individual conclusions at each of the 20 KOPs into an overall conclusion? And what was your overall conclusion?

MR. BLAU: Yes. The next slide is a summary of those 20 KOP findings. This can be found in exhibit 4, page 159. Overall we had 17 positive conclusions, one neutral, and two negative from the 20 viewpoints.

The next slide summarizes our overall findings. And this would be exhibit 4, page 178. When you look at the evaluation of the 20 KOPs, when you look at the proposed design refinements,

improvements, the limited plume visibility. On page 61 of the AFC we say that the plume is visible less than 70 daylight hours a year.

When you, fourth, look at the compliance with the LORS. And fifth, the positive cumulative impacts, we examined 16 potential projects within the five-mile radius. We did not identify any adverse cumulative impacts. The visual dominance of the existing power plant stacks is removed. The competition between the stacks that exist now and the rock is eliminated. Views of the rock and the coast are enhanced.

So, we drew, overall, a very positive visual effect finding for the proposed project.

MR. ELLISON: What was your conclusion regarding the compliance of the project with all laws, ordinances, regulations and standards pertinent to visual resources?

MR. BLAU: Well, we analyzed those individually in two categories, visual quality and visual resources and landscaping and concluded that we were in compliance with each of the LORS.

MR. ELLISON: And what was your conclusion regarding the significance of impacts pursuant to CEQA, both on an individual project

basis and on a cumulative basis?

MR. BLAU: Well, CEQA guidelines relative to visual ask the applicant to look at the following: Findings of nonsignificance would mean no substantial adverse effect on a scenic vista. No damage to scenic resources. No substantial degradation of visual character or quality. No creation of new source of substantial light or glare. I'm summarizing these, but in brief, but the overall finding would be here that we do not have an adverse significant visual impact relative to these guidelines.

MR. ELLISON: And that would also be true on a cumulative basis with other foreseeable projects?

MR. BLAU: Yes. True.

MR. ELLISON: Have you had an opportunity to review the final staff assessment?

MR. BLAU: Yes.

MR. ELLISON: And do you agree with the conclusions of staff regarding the significance of impacts and compliance with applicable laws, ordinances, regulations and standards?

MR. BLAU: Let's go to the next slide, and this is, in effect, right out of my testimony.

I'll give a two-part response to that.

While I think we differ quite a bit in terms of approach and methodology that is appropriate for this particular type of action, we agree with the conclusions in the FSA part one of November 1st. So, we're in agreement.

Relative to the conditions -- would you like me to go into those?

MR. ELLISON: Well, let me just ask you, what conclusion did you reach regarding the conditions of certification proposed by staff?

MR. BLAU: Okay. I would refer to page 21 of my testimony. And VIS-1 there are six visual conditions; they are summarized on the screen just in terms of the topics that they address.

I would ask, VIS-1 deals with enclosure. And I have additional graphics in this presentation to deal with that. I'd ask if I could address 2 through 6, and then end on 1, because 1 is a more involved discussion, I think.

MR. ELLISON: Certainly.

MR. BLAU: Well, I'll comment on each one of these, and it's in my testimony. VIS-2, the condition asks for vegetation to reach its

maturity with full screening potential within five years of completion of construction of the new power plant.

We are certainly willing to explore meaningful landscape proposals that meet the intent, but the word full, full within five years, is, we feel, overly prescriptive and restrictive to accomplish.

So we're suggesting that the words be modified, it's on the top of page 22, the underlying words would be added, which say taking into consideration the escha buffer around Morro Creek, trees must be planted sufficiently close to the southern boundary of the trailer park, so as to effectively screen the power plant from views within the trailer park. Efforts shall be taken to preserve the views of the rock from within portions of the trailer park.

Should I continue with the other conditions?

MR. ELLISON: Please, just go through all of them.

MR. BLAU: Okay. VIS-3 deals with lighting. And I think while Duke can agree to a requirement that visibility of lighting be

minimized, this strict requirement that lighting be designed and installed such that light bulbs and reflectors are not visible from public viewing areas is, again, over prescriptive and virtually impossible for us to do.

So we are proposing under VIS-3 that the words read prior to the first turbine row of the second unit (unit construction in sequential). Project owner shall design and install lighting where exterior light fixtures are hooded with lights directed downward or toward the area to be illuminated so that back-scatter to the nighttime sky is minimized.

VIS-4 deals with demolition rubble on the site. And asks that Duke appropriately locate and screen the demolition rubble such that it is not visible from the Embarcadero. As is discussed in waste-7, again it's the strictness of the words that are the issue here. We don't know if it's feasible. It may conflict with the community's desire to minimize truck traffic, and may conflict with the desire to accomplish the tear-down in the shortest possible time. So there's a lot of things being balanced here.

So we're suggesting on the top of page

23 that the condition be revised to read the project owner shall appropriately locate and screen the demolition level such that it is minimized to the maximum extent reasonable from the Embarcadero.

VIS-5 deals with the pedestrian bike bridge. Here it's a matter of timing. The condition language should include review and comment by the City, approved by the construction project manager CEC, timing on verification should delete prior to the first turbine row. And we should insert, or we're suggesting we insert the words at least 60 days prior.

And then in VIS-6, which deals with site restoration, grading all areas to back to original grade is neither feasible nor desirable. We're suggesting here that under the protocol we've rephrased that to say all evidence of construction activities, including ground disturbance, due to staging and storage areas shall be removed and remediated upon completion of it, required by the approved landscaping, grading or site restoration plans. Any vegetation removed in the course of construction will be replaced on a one-to-one and in-kind basis. Such replacement planting shall be

monitored for a period of three years to insure survival. During this period all dead plant material shall be replaced.

The project owner shall submit a site restoration plan -- this is really more a biological issue, I think, than visual -- for approval to the California Coastal Commission, the CPM and the City.

Those would be our comments on VIS-2 through -6.

MR. ELLISON: Okay, turning to the question of enclosure and condition VIS-1, could you first of all describe your response to the staff's supplemental analysis on enclosure, both full enclosure and partial. And then secondly, specifically your reaction to proposed condition of certification VIS-1?

MR. BLAU: All right. This slide on the screen now is really a summary of words in my testimony. And the overall conclusion would be that I agree with staff's conclusion about full enclosure. That the project, as proposed, is a more positive visual impact than what full enclosure would portray.

However, I disagree with the conclusions

about additional enclosure. And we say additional because as I pointed out earlier in the testimony, there already is partial enclosure of the turbine buildings. And so we are talking about degrees of additional enclosure.

And I put down here six points that form the basis for my disagreement that additional enclosure is warranted.

Point number one, the FSA concludes that there are no significant visual impacts, so I would maintain that, in fact, with the positive visual impacts overall, that no mitigation is required. And that additional, either -- or additional enclosure is not warranted.

The third point here is there is uncertain engineering feasibility associated with either full enclosure or partial enclosure, and Russ is able to speak to that if desired.

The fourth point is that in the staff's assessment of partial enclosure, only two of the 20 KOPs were examined apparently, and those were KOPs-5 and -6. Now those are clearly the viewpoints of most concern to the California Coastal Commission, but I really don't think it's proper to just examine the issue from the coastal

view, and ignore the views from all over the town and from the surrounding hillside residences. And I do feel that partial enclosure, i.e., a shield or a screen on top of the HRSGs would add structural mass and prominence. It would add mass and prominence, particularly if you look from the hillside residences down through the project you would be adding height and mass to that project blocking more ocean views.

And lastly, I think that additional enclosure runs contrary to everything we've heard from the City about maintaining as low a profile as possible.

MR. ELLISON: Based on that what is your recommendation regarding condition of certification VIS-1?

MR. BLAU: Would you -- what would make sense for me is to go through a couple of these slides on our analysis and draw the conclusion?

MR. ELLISON: That's fine, if you have additional information regarding your analysis, please provide it.

MR. BLAU: Okay. Well, the request that came to us was to look at full enclosure. And we actually met with the Executive Director and Staff

of the California Coastal Commission on December 5th.

And I'd like to show you at least what full enclosure could look like. Now, this is not with any deep architectural studies, just a massing study, if you will, of what we would have.

This site plan shows the current proposed plot plan with enclosures superimposed on top of it. This exhibit 166 from our analysis of full enclosure.

Now, if all the engineering and layout and land use issues could be resolved, full enclosure might look like this. You'd have a building that's 620 feet in length, 550 feet in width and about 130 feet high. It would also drive the stacks up from another 45 feet. So the stacks would go from 145 to 190.

Let's just go through a couple other images here. All the rest, if I could, all the rest of my images are out of the full enclosure testimony, the ones we'll be seeing.

Just to recap, this shows the existing profile of the existing power plant. Note that the existing turbine building is 148 feet high. The next slide superimposes the proposed, the

current proposed power plant on that. Notice the top of the HRSGs there at 90 feet, and the stack height at 145, a bit below the existing turbine building.

And then if we click to just the proposal, and now superimpose the enclosure, this is what we might have. And the reason for that size is for flexibility and maneuverability inside with overhead cranes. That is one of the big drivers of the shape that you see there. As I said, Russ could talk much more about all the engineering implications of full enclosure.

Now, we looked at it from six KOPs. This is from KOP-5. This is the current proposal, and then superimposed the full enclosure. You see the enclosure and you see the stacks going up in height.

We looked at the area; we looked at how much of the sky are we penetrating. How do we change horizontal field of view and obstructions of rock, beach and ocean. And then we move in closer here. We can look at five closer in, as proposed, and with enclosure. And then let's look at six as proposed, and with full enclosure. And seven, as proposed and with full enclosure. And

then we have eight from Coleman as proposed and full enclosure.

And now we move up to the hillside, a representative view at 14. Okay. Now, back up one, Paul. I'd like to point out while we have this on the screen, partial enclosure, if you could point that out, Paul, partial enclosure would most likely raise the roof of those HRSGs at least 20 feet. And the stacks would go up another 20 feet, as well. And in this particular view you would block views of the ocean that we now see through the top of the HRSGs.

And then from 15, as proposed, there's full enclosure. Again, if we could point out, Paul, if we do partial enclosure with screens or shields, you would lose that strip of ocean view that you see through the power plant.

So, my overall conclusions are that full enclosure has far more negative visual impacts than the current proposal. And I think I would say that partial enclosure that was depicted in staff testimony, while it might improve a view or two from the beach, I think overall I would not recommend that from the full set of views, particularly from the hillside residential views.

I think that making the project as least as obtrusive as possible is still the ultimate goal.

MR. ELLISON: With that background then, what is your recommendation regarding condition of certification VIS-1?

MR. BLAU: Well, at this point, as the testimony says, we're recommending that it be deleted.

MR. ELLISON: And lastly, if the Commission were to reject that recommendation, then is the wording of VIS-1 acceptable to you?

MR. BLAU: The wording is still not acceptable because as it's written it zeroes in on just KOPs-5, 6 and 7, asking that that be the subject of, you know, reducing the industrial appearance, the pipe racks and so on. And I could not agree with that.

MR. ELLISON: So what would you recommend as a change to that condition? Again, assuming that the Commission rejects your proposal to delete it in its entirety.

MR. BLAU: Well, I think it's a question of whether one concludes that screening or shielding on top of the HRSGs is a good thing or not. And my position is that it would actually

degrade a number of the views, while it might improve these few views.

And what would be -- I'm not sure what would be a kind of a middle ground position on that. I guess you could argue that -- I guess I'd just stop there.

MR. ELLISON: Okay, that's all I have. The panel is available for examination.

HEARING OFFICER FAY: Let's go off the record.

(Off the record.)

HEARING OFFICER FAY: All right. The panel is available for cross-examination. First of all, Mr. Ellison, would you like to move your exhibits?

MR. ELLISON: Thank you, definitely. We would move exhibit 191, including the exhibits that are incorporated by reference therein, which are found at page 38 of that exhibit and include the following exhibits: 4, 19, 30, 34, 37, 47, 51, 53, 58, 163, 74, 95, 164, 114, 165, 125 and 166.

HEARING OFFICER FAY: Is there any objection?

MS. CHURNEY: I have an objection with

respect to exhibit 191 insofar as it is replete with hearsay. And I'm referring specifically to pages 25 through 26 and 37. There are quotes from a number of outside sources, including newspapers, campaign materials and whatnot. Counsel had an opportunity to attach the source material if he wished. He has not done so, so I would object to introduction of this exhibit with the testimony contained in those pages included.

HEARING OFFICER FAY: What were the pages subject to your objection?

MS. CHURNEY: 25, 26 and 37.

HEARING OFFICER FAY: Any response, counsel?

MR. ELLISON: Astonishment. The objection comes from CAPE, who has introduced hearsay testimony throughout this proceeding. On soil and water we had reference to the Cahn report. Mr. Cahn is certainly not here to testify as to future market conditions.

On air quality we had a four-inch stack of hearsay testimony that came in on rebuttal --

MS. CHURNEY: It wasn't hearsay; we provided those documents to you, and I don't see how you can say it was.

MR. ELLISON: The provision of those documents doesn't produce the witness who prepared them. Ms. Soderbeck did not prepare those documents.

HEARING OFFICER FAY: Okay.

MR. ELLISON: Hearsay testimony is admissible in proceeding --

MS. CHURNEY: But that is --

(Parties speaking simultaneously.)

MS. CHURNEY: -- speak for themselves, and you have them in the record.

HEARING OFFICER FAY: Okay. The objection is overruled and we'll receive exhibit 191, but note your objection and it will go to the weight of evaluating those portions of the exhibit.

And now I'd like to ask if -- on the record -- if staff has any cross-examination of the panel?

MS. HOLMES: Staff does not.

HEARING OFFICER FAY: And does the City have any cross-examination?

MR. ELIE: Briefly.

HEARING OFFICER FAY: Okay.

MR. ELIE: And I'll address to Mr. Blau,

but feel free to defer. And I think there are going to be noncontroversial.

CROSS-EXAMINATION

BY MR. ELIE:

Q In the verification sections of all six conditions of certification the staff has alternated between 60 days and 90 days, assuming, of course, that visual-1 remains, do you have any objection to making all of the verification timeframes 90 days?

MR. BLAU: No, that's fine.

MR. ELIE: Okay. There appears to be no condition of certification relating to the intake structure. And I'll propose a concept and I have some words, understanding that you're just hearing these for the first time.

Similar to visual-5, as follows: 90 days prior to construction of remodeling of the intake structure, the project owner shall submit the design to the CPM for review and approval, and the California Coastal Commission and the City of Morro Bay for review and comment.

Do you have any objection to that?

MR. BLAU: No.

MR. ELIE: Finally, I'm not sure if I'm

missing something, but in your testimony, exhibit 191, the proposed protocol on page 23 for VIS-6, seems to be missing words. On the second line: shall be removed and remediated upon completion of as required by the approved. Seems like something should be completed there. Are words missing?

MR. BLAU: It appears there are some words missing but I don't have them here.

MR. ELIE: The original protocol said: construction to its preconstruction condition or. So it would be completion of construction to its preconstruction condition or as required. I think it's just a gap. I just want to be sure that the record's clear.

MR. BLAU: Yeah, I'm agreeing there's a gap there.

MR. ELIE: Okay, just a question of what the words should be.

MR. BLAU: Sorry.

MR. ELIE: Are those the right words that should be inserted there?

MR. BLAU: Yes.

MR. ELIE: Okay, thank you. No further questions.

HEARING OFFICER FAY: No further

questions, okay. CAPE.

MS. CHURNEY: Yes.

CROSS-EXAMINATION

BY MS. CHURNEY:

Q Mr. Blau, what did you do to confirm that the quoted material contained in exhibit 191 at pages 25, 26 and 37 was true and accurate?

MR. ELLISON: Counsel, let me clarify your question. Are you asking the witness as to whether these are accurate --

MS. CHURNEY: I'm --

MR. ELLISON: -- quotations, or are you asking regarding the accuracy of what is said?

MS. CHURNEY: Both.

MR. ELLISON: Okay. With that understanding.

MR. BLAU: Well, in a couple cases I heard, like at community workshops, I've heard the view expressed, and the statement made. But, I can't verify the whole set of opinions that are in here.

MS. CHURNEY: And I also heard you mention in your testimony that the plume will be visible less than 70 daylight hours a year. Did I hear that correctly?

MR. BLAU: The plant?
MS. CHURNEY: The plume.
MR. BLAU: The plume. Yes, I said that.
MR. ELLISON: No, I believe the question was 70 daylight hours.
MS. CHURNEY: I'm sorry, I thought I said that, 70 daylight hours a year.
MR. ELLISON: Okay, sorry. The question is was it 70 daylight hours a year.
MR. BLAU: Yes.
MR. ELLISON: Okay, thank you.
MS. CHURNEY: And that means 70 hours during the course of a day total during a year, is that correct?
MR. BLAU: Seventy hours during the course of a day? I don't --
MS. CHURNEY: Seventy hours which occur during a day as opposed to night, in one year.
MR. ELLISON: Do you understand the question?
MR. BLAU: Ask it one more time.
MS. CHURNEY: I'm just trying to ask you what it means. Maybe a better way to ask it is what does it mean when you testified that the plume will be visible less than 70 daylight hours

a year.

MR. BLAU: Well, first of all, I'm not the expert on plume visibility. Gary -- all our work on that subject is derivative of Gary Rubenstein's testimony. And he did the analysis to draw those conclusions. And then we work off his conclusions to decide whether there is a significant visual impact or not.

So I cannot testify to the frequency of visibility or how it was calculated or anything about the number.

MS. CHURNEY: So you're just repeating what you believe Mr. Rubenstein told you at some point?

MR. BLAU: Correct.

MS. CHURNEY: And so you have no basis other than that, what he told you --

MR. BLAU: Correct.

MS. CHURNEY: -- to draw that conclusion? You also testified the overall conclusion is that the project will be overall positive. In drawing that conclusion did you include in your analysis an analysis of the overall increase in the complexity of the structure which will be visible with the new plant

versus the old plant, which is fully enclosed?

And specifically I'm talking about the visible pipe racks and the overall more industrial nature of the new plant.

MR. BLAU: Yes. We did look at that. There are no precise formulas for all these components and how they factor into the overall conclusion. But the complexity of the pipe racks are mostly from the close-in views.

But, as I said in my testimony, there's a widespread population that has very significant benefits with this action that do not see that detail on that complexity, and have dramatically improved visual quality as a result of the action.

MS. CHURNEY: Would you also agree, however, that there are also views that will have more significant views of the more complex nature of the new plant?

MR. BLAU: Would you state that one -- state the question once more?

MS. CHURNEY: Would you also agree, though, that there will be segments of the community that will have a more complex view with the new plant, given its complexity and industrial nature?

MR. BLAU: It's possible.

MS. CHURNEY: In discussing VIS-2, am I to understand that you are proposing, Duke is proposing to eliminate the requirement of full screening within five years?

MR. BLAU: Eliminate screening. I think that it is not very practicable to say that full screening is achievable within the five-year period, completely surrounding the power plant. And as I said in my testimony it's an unrealistic objective. We're looking for something that's a little more realistic and a little more do-able in terms of the landscape concept plan.

MS. CHURNEY: I just want to confirm, because my reading of what is contained in exhibit 191 as Duke's proposal doesn't, as far as I can tell, have any mention of a timeframe, five years or otherwise, is that correct?

MR. BLAU: You mean in the revised wordings? That's correct.

MS. CHURNEY: And based on your attendance at community workshops and what you know has been expressed by the community of Morro Bay, including the City Council, isn't it correct to say that a high priority has been full

screening of the proposed new plant?

MR. BLAU: I think that's correct in that it was stated in the resolution. But I also think it was an opinion stated without full recognition of the site constraints of the escha, of the need to be careful about the dune stabilization.

So I respect the opinion of the City in maximizing screening, but I think there's other very important factors that also have to be balanced in the ultimate landscape plan.

MS. CHURNEY: And ultimately then what Duke concluded was that your proposal, Duke's proposal would not include full screening within five years, is that correct?

MR. BLAU: As I said, I don't think full screening within five years is a do-able objective.

MS. CHURNEY: And with respect to VIS-1, I think you stated that your conclusion was that no mitigation is required and that Duke does not support either full or partial enclosure, is that a correct statement of your -- or a summary of your testimony?

MR. BLAU: Could you ask me one question

at a time? There seemed to be several in there, and I'd like to just take them one at a time.

MS. CHURNEY: Sure. With respect to VIS-1, I believe your conclusion was that no mitigation is required, is that correct?

MR. ELLISON: Just for clarification, when you say mitigation, you're referring to specifically the enclosure requirements that we've been discussing and are represented in that condition, correct?

MS. CHURNEY: Right. I mean I'm assuming that's how Mr. Blau used it when he stated that.

MR. BLAU: Mitigation is a term of art in CEQA and NEPA that relates to adverse impacts. We have not found any adverse visual impact, therefore we do not have an obligation to mitigate.

MS. CHURNEY: But didn't you just tell me a few moments ago that it is possible, given the more complex and highly industrialized look of the new plant, that there could be adverse visual impacts in certain areas of the City?

MR. ELLISON: That misstates his testimony.

MS. CHURNEY: Well, please correct me if I'm wrong in summarizing your testimony.

MR. BLAU: Well, I will say again that I thought I presented it very clearly, but while you can have, in a series of representative viewpoints, you could have some negative individual viewpoints, the objective is still to draw an overall conclusion about the project in its setting.

The overall conclusion is an overwhelmingly positive conclusion, even though one could move so close to the proposed project that you certainly would have a negative change from that point of view.

MS. CHURNEY: In reaching your conclusions with respect to VIS-1, did you also take into account resident comments that you heard at the workshops or at the City Council meetings or elsewhere on the concerns about the ugly industrial nature of the proposed plant?

MR. ELLISON: Objection, argumentative and assumes facts not in evidence.

MS. CHURNEY: Well, did you hear any such comments throughout the course of your work on this project?

MR. BLAU: We heard comments that ran the full gamut from people that had all kinds of views on what the project looked like in their eyes, which is pretty typical on this type of work.

MS. CHURNEY: And did you hear comments to the effect, as I've just described, about the ugly industrial nature of the proposed new plant?

MR. BLAU: At our community workshops I can recall one or two speakers that might have used that word.

MS. CHURNEY: And were those comments in that perception taken into account in arriving at your recommendations concerning VIS-1?

MR. BLAU: Well, I think all the comments we've heard throughout the last two and a half years, three years of work were factored into our overall conclusions, yes.

MS. CHURNEY: You've described Duke's position with respect to full enclosure or partial enclosure. And have presented some graphics on the overhead depicting what Duke believes it would look like with either full -- I believe it was actually full enclosure.

What analysis went into the

determination of the dimensions of that presentation of full enclosure?

MR. BLAU: I'd like to defer that to Russ, as the project engineer to comment on that.

MR. POQUETTE: When we were asked to take a look at that, taking into account we already had done some partial enclosures in terms of the turbines, themselves, we now had to provide a facility that within the context of full enclosures is totally self contained.

What that means is the predominant factor that would set the height would be the internally contained bridge cranes that would be required to access the top of the HRSGs for the steam drums and other equipment up there that may need removal at some point in time.

It did not take into account a number of other engineering details that would normally be done at a later stage in the job, so this is our best assessment of the preliminary sizing.

MS. CHURNEY: I guess my concern goes more towards the footprint that is shown for the full enclosure plant and how that was arrived at, if you could explain that?

MR. POQUETTE: Again, we took the

existing plot plan that has been proposed as the project, and we provided allowances around the equipment that would provide both the enclosure and access for maintenance and operation.

MS. CHURNEY: You mentioned that certain engineering aspects were not considered yet at this point. What are those that have not been considered?

MR. POQUETTE: There are a number of things. There has been no design work done relative to the enclosure, itself, as it relates to the actual configuration, earthquake considerations. When you get a building of this size it's into the issue of contained space, numbers of points of egress. How do you isolate internally for fire protection systems, for different pieces of equipment and different types of protection systems.

That, among a number of other things, none of that's been considered at this point.

MS. CHURNEY: Might consideration of those additional factors increase or decrease the size of full enclosure?

MR. POQUETTE: Typically when you do work at this preliminary stage the chances are

significantly higher that it would increase rather than decrease.

One example. If you have to segregate internally part of the plant because of a particular fire protection system that you couldn't use on other pieces of equipment, so you tend to have to isolate that. That would tend to make things larger.

MS. CHURNEY: And if I'm to understand your testimony then, the diagram that was presented of the footprint of full enclosure is your best estimate at this point?

MR. POQUETTE: Best estimate at this point. And if you were to ask the question of larger or smaller, it would be that or larger.

HEARING OFFICER FAY: Ms. Churney, at this point, we are not trying to cut you off. We are at our ending time for today. Can you give me an estimate of how much --

MS. CHURNEY: I think I may be done, perhaps one more question.

HEARING OFFICER FAY: Okay. Because we do have some public comment to take.

MS. CHURNEY: If you could refer to page -- I think this is for Mr Blau -- page 26 of

the prefiled testimony, which is a diagram of the proposed power plant with full enclosure. I just wanted to confirm that as I read and review this diagram, that with full enclosure the stacks are shown at 190 feet tall and the building is shown at 130 feet tall, is that correct?

MR. BLAU: That's correct.

MS. CHURNEY: And that's, for the stacks that's shorter than the current plant stacks, is that correct?

MR. ELLISON: Question. By current plant you mean the existing --

MS. CHURNEY: Existing plant, yes.

MR. BLAU: That's correct.

MS. CHURNEY: By a considerable sum, right?

MR. BLAU: Well, the existing stacks are 450 feet high.

MS. CHURNEY: And with full enclosure as you show it, the stacks would be 190 feet tall, correct?

MR. BLAU: Correct.

MS. CHURNEY: And the building is also, as shown on the diagram, with full enclosure, the building is also shorter than the current -- the

existing plant's building, is that correct?

MR. BLAU: The existing, the long dimension on the existing turbine building is 490 feet. And the long dimension on full enclosure is 550. So, no, it would be longer.

MS. CHURNEY: Okay, it would be longer. How about height?

MR. BLAU: The existing turbine building is 148 feet high. And this proposal is 130 feet high.

MS. CHURNEY: Which is shorter than the existing plant's building, is that correct?

MR. BLAU: Right.

MS. CHURNEY: I have no further questions.

HEARING OFFICER FAY: Thank you. Mr. Ellison, can your panel be available tomorrow? Can Mr. Blau be available tomorrow?

MR. BLAU: Yes.

HEARING OFFICER FAY: Okay. And then do you have any redirect?

MR. ELLISON: I do not have redirect. I do have one brief statement as to the -- in response to the cross-examination about what's in the record already, but no redirect.

HEARING OFFICER FAY: Okay. We do have a public comment. Is Susan Bertrand here?

MS. MENDONCA: Mr. Fay, she asked that you just answer her question.

HEARING OFFICER FAY: Okay. I'm not the one to answer technical questions. She said:

> Thank you for considering visibility; however, what about the more immediate problem of emissions."

Now, by that do you mean visible emissions, because that's what we're talking about today is visual impacts. We did talk about air quality emissions yesterday, and talked about the things that will go into the air that are considered air pollution.

MS. BERTRAND: Well, I understand -- as I understand it, Dr. Phyllis Fox is a reluctant expert witness. And as I understand it, the emissions that are not only visible, but they're allergy-causing and among other things.

I'm wondering, I say I appreciate the visibility issue because that is important. And at this juncture in history it may be very important.

CHAIRMAN KEESE: I think the answer is

we took three hours of testimony yesterday afternoon on that issue. And it has been --

MS. BERTRAND: Has it been resolved?

CHAIRMAN KEESE: No -- well, none of these issues are resolved. All of these issues are presented and then they will be briefed. And then the Committee will resolve them.

So we have taken the testimony on that issue.

MS. BERTRAND: Okay.

CHAIRMAN KEESE: Thank you.

HEARING OFFICER FAY: Perhaps one suggestion, Ms. Mendonca can help you with this, if you do have specific concerns about air quality, we'll still take them into account if you want to send them in in a letter. She can help you prepare comments.

MS. BERTRAND: I'm not an expert.

HEARING OFFICER FAY: You don't need to be, if you just have a concern you can send your word to us about your concern.

MS. BERTRAND: And who do I send it to?

HEARING OFFICER FAY: And she'll take care of you. She'll tell you where to send it.

MS. BERTRAND: Thank you very much.

HEARING OFFICER FAY: Okay, thank you very much.

Okay, Mr. Ellison, your comment?

MR. ELLISON: I just want to note for the record that in CAPE's questioning there was a reference to Mr. Rubenstein telling Mr. Blau about the 70 daylight hours.

I just wanted to make clear that that information was presented in the AFC. It's section 6.13.2.5. The data requests were submitted asking for all of the assumptions that Mr. Rubenstein used in developing that, which are set forth in exhibit 30 in this proceeding, going for pages, including all the windrows and everything else.

MS. CHURNEY: Thank you for clarifying that.

HEARING OFFICER FAY: Mr. O'Brien does have some questions for Mr. Blau, but he's thoughtfully withholding them so that we can all go to dinner tonight.

I just want to reiterate that it is important for all the exhibits that have been offered to be supplied to the docket and to all the parties so that they are on file.

So if any party that is hoping to make some of these exhibits part of the record, they must serve them on all the other parties.

Are there any last-minute matters before we adjourn for this evening?

Okay, I see no indication. I will remind you tomorrow we will resume with visual resources, and then we will have our scheduling conference after that.

As we have done in the past I'll be passing out forms to try to get the parties to indicate to me about how much time they think their direct and cross-examination will take on the topics that remain. And we'll be addressing biological resources and as potential mitigation to that, various cooling options. And also the general topic of alternatives, as defined under CEQA.

With that, we're adjourned tonight. Thank you.

(Whereupon, at 6:11 p.m., the hearing was adjourned, to reconvene at 9:00 a.m., Thursday, March 14, 2002, at this same location.)

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CERTIFICATE OF REPORTER

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

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

IN WITNESS WHEREOF, I have hereunto set my hand this 1st day of April, 2002.