ALASKA POWER AUTHORITY SUSITNA HYDROELECTRIC PROJECT SETTLEMENT PROCESS

POSITION PAPER DISCUSSION MEETING #5

April 22, 1985

Northern Lights Inn 598 W. Northern Lights Blvd. Anchorage, Alaska

New Business: Position Papers W-12, S-3, R-4, F-7, F-9

ATTENDEES

Tom Arminski, APA Bruce Bedard, CIRI Villages Pam Bergmann, HE Chuck Elliott, HE Randy Fairbanks, HE Larry Gilbertson, HE Chris Godfrey, EPA Mike Granata, ADNR Hank Hosking, FWS Mark Kuwada, ADF&G Jeff Lowenfels, BHB Eric Marchegiani, APA Tom Mears, CIAA Dallas Owens, HE Jack Robinson, HE Dan Rosenberg, ADF&G Ben Rosenthal, NMFS Phil Scordelis, HE Brad Smith, NMFS Rick Suttle, HE Jim Thrall, HE

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May 3, 1985 Susitna File No. 1.8.1/6.18.8.5/1.17.4.2

Mr. Dan Rosenberg Alaska Department of Fish and Game 333 Raspberry Road Anchorage, Alaska 99502

Subject: Susitna Hydroelectric Project Document Transmittal

Dear Mr. Rosenberg:

Please find enclosed for your use one copy of the Fifth Position Paper Discussion Meeting Transcript.

Sincerely,

, \ - cl B 6 TO A

James B. Dischinger Project Manager Susitna Hydroelectric Project

jmo

Enc: as noted

cc w/o Enc:

T. Arminski, Power Authority C. Curtis, VFSC&L (DC) J. Lowenfels, BHBP&A W. Larson, HE

ALASKA DEPT. OF FISH & GAME МДУ - 8 (295) RECIC. CL. OFFICE

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1		ALASKA POWER AUTHORITY
2		SUSITNA HYDROELECTRIC PROJECT
3		SETTLEMENT PROCESS
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5		POSITION PAPER DISCUSSION MEETING #5
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PROCEEDINGS

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2 MR. ARMINSKI: This is Position Paper Dis-3 cussion Meeting #5. We don't have any old business to discuss today so we're going to go right into the position papers. The 5 first of which is W-12. This is the significance of reduction 6 in big game and furbearer populations from increased hunting/ 7 trapping pressure due to increase accessibility of the project garea. It is our position that there will be a reduction, however, 9 it will be minimal. The increased harvest of moose, brown bear 10 and black bear and wolves will result in locally reduced popula-11 tions but we feel that it's not going to be real significant. 12 Most of the magnitude of these reductions depends on the off 13 road and access policies that are adapted primarily by adjacent 14 and owners. And that the mitigation measures in this paper will 15 reduce the level of those impacts. Chuck are you going to dis-16 cuss this? Chuck Elliott.

MR. ELLIOTT: Basically the information we used in putting this together was look at past harvest records, the information that we had collected that was presented in the license application and pertinent items we could find in the current scientific literature regarding the response or the reaction of some specific species to access and harvesting as have been found in other projects or other areas, trying to emphasize areas and studies that have taken place within Alaska or within the horthern region. I guess just go ahead and go for questions here.



MR. ARMINSKI: Any discussion?

MR. LOWENFELS: Come on, Dan.

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MR. ROSENBERG: Hank has something to say. MR. HOSKINS: I don't want to set the tone 3

5 of the whole meeting. I prefer to read it for the record. The 6 paper gave me a case of absolute hizzy fits. It says what any 7 -- whatever any given reader wants and I still don't know what 8 the Power Authority's position is. I find conflicting statements 9 throughout. As examples; Page one, Position. The position state-10 ment says the reduction in big game and furbearer populations 11 arising from increased pressure due to increased accessibility 12 will be minimal. But the next sentence concedes that increased 13 harvest pressures on animals may result, depending on future 14 regulatory policies. On page four, the second paragraph under 15 hunting and trapping regulations the Power Authority recognizes 16 that modification of State regulations can not be considered 17 as part of the mitigation plan. It then goes on to list seven 18 options for changes to hunting regulations. On page two, Dall 19 sheep are dismissed because all legal rams are shot anyway. 20 Improved access may increase hunting pressure on caribou, the 21 harvest of which is permit controlled but because of increased 22 hunter success due to improved hunter access the number of permits 23 may have to be reduced, yet the APA position states that impacts 24 will be minimal. The next paragraph states that improved access 25 could increase the illegal take of all species. This is an



1 adverse impact. But in the third paragraph on page three the 2 statement is made that improved access may decrease poaching on 3 I'm not about to start a political argument on whether wolves. this is a positive or an adverse impact to wolf populations. 5 I suggest instead that it is perhaps inconsistent that improved 6 access will lead to increased poaching on one species and de-7 creased poaching on another. Page four, the first paragraph with 8 relation to furbearers, the statement reads, "improved access 9 into the project area will increase the potential for local over-10 harvesting." This also appears to contradict the position that 11 impacts of increased accessibility in the project area will be 12 minimal. Page five, mitigation measure one describes a lessoning 13 of impacts to the animals by the Power Authority prohibiting 14 employees and family from hunting and restricting public access 15 on the project. But on page six, mitigation three the Power 16 Authority states a willingness to assist in controlled hunts to 17 lesson the impacts of the project on big game. What is proposed 18 to be shot? Is it big game, people or ATV's? Mitigation statement 19 number four on page six should be expanded to include definitive 20 measures under consideration as we recommended in our comments 21 on issue W-4, habitat reduction from middle basin furbearers we 22 support the establishment of a 35,000 acre furbearer bear manage-23 ment area on compensation land. Please rework the paper to clearly 24 state the APA position and present the case accordingly. This 25 procedure of presenting all the options and having the reviewer



1 and the APA chose whatever is appropriate for the moment is un-2 satisfactory. 5

MR. FAIRBANKS: Can we go through each of 4 those one at a time?

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MR. HOSKINS: Certainly.

6 MR. FAIRBANKS: I think that's probably the 7 only way we can respond to them. Do you want to just read the 8 first one?

9 MR. HOSKINS: About this gives me a case 10 of hizzy fits.

MR. LOWENFELS: Please spell that.
MR. ELLIOTT: You may have to spell that
13 one.

MR. HOSKINS: Page one, position. The position statement says the reduction of big game and furbearer populations arising from increased pressures due to increased accessibility will be minimal but the next sentence concedes that increased harvest pressure on animals may result, depending on future pregulatory policies.

20 MR. ELLIOTT: That might be -- Well, there 21 is a problem there with semantics because trying to condense it 22 down and it says, "most big game and furbearer populations" the 23 idea there was to try and sort out such things as -- as the --24 well, actually as the caribou and the sheep that are fairly well 25 regulated as far as the harvest goes and to try and separate them



1 out and point out, as the next sentence says, and I guess the 2 wording is not all that grand to point that out, but to draw ³ attention to the species that are probably going to be impacted as separate from the species that we don't feel will be impacted 5 because of the -- you need a permit to go harvest the caribou 6 and the Dall sheep basically -- not necessarily a permit but be-7 cause of horn size they're fairly well regulated as far as what 8 can be harvested now. It was an attempt to remove those species 9 that are regulated and if there are more people out there if they 10 don't have a permit they're not going to really be able to do 11 anything to the population and bring attention to the ones that 12 aren't permit regulated and may, you know, suffer an impact. 13 That's why the second line points out specifically moose, bears 14 and wolves may result in locally reduced populations. It's pro-15 bably going to be a problem with semantics is maybe what it is. 16 List the species that we don't think and then list the species 17 that we think will have some sort of an impact. But that's what 18 that attempt was there to try to get rid of the ones that are 19 permit regulated as opposed to the ones that aren't and will be 20 subject to the -- possible increase hunting pressure.

21 MR. LOWENFELS: I think later on Hank points 22 out that he's got a problem even with the permit regulated in 23 the sheep.

MR. FAIRBANKS: That's a separate comment.
I think -- Yes, the point is there that it can be reworded to



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1 make it clearer.

MR. ELLIOTT: But that's what the idea was 3 trying to bring out. 7

MR. FAIRBANKS: Some species will be impacted and some won't. Or in general that's what the sentence
is saying. Those that are not strictly permit controlled are
likely to be reduced.

8 MR. ROSENBERG: You're assuming that in the9 next 50 years this situation is not going to change.

MR. FAIRBANKS: Well, I'm assuming that they're not going to remove the permit restrictions from the Nelchina caribou herd. If anything it's going to get tighter with increasing populations. I think the same assumption --

MR. ROSENBERG: -- I mean, I agree with that but maybe for some of these populations that may or may not be the case. I don't know.

MR. FAIRBANKS: The same assumption is valid for Dall sheep. They're not going to get any looser on the restrictions.

MR. MARCHEGIANI: I guess I'm a little confused by the whole thing. It may be the reason why it's worded the way it is in that it may be somewhat confusing is that we're in kind of a rough spot, Hank. We've got Fish & Game telling us that they want to turn around and manage the resource and yet we're trying to tell you what the impacts are going to be based



1 on the project. It really depends on what Fish & Game's manage-2 ment goals are going to be. And how can I tell you what the im-3 pact is going to be when Fish & Game is going to manage it. And 4 we've been told, at least in the last meeting --5 MR. ROSENBERG: -- No, you're distorting 6 the whole situation. Eric. 7 MR. MARCHEGIANI: Okay. 8 MR. ROSENBERG: Okay. You're trying to take 9 the thing from one here and you're just taking it from here and 10 you're trying to turn the whole thing around. Let's just take 11 a look at the impacts to the populations and what they're going 12 to be. I don't think we need to look at the management consider-13 ations to do that right now. I think we can look at what's out 14 there and what the project's going to do and see how that's going 15 to affect it in light of what's going on right now. 16 MR. LOWENFELS: I think that's valid. Let 17 me get back to your original comment which was that the -- that 18 things may happen in the next 50 years while the project is going 19 on that we haven't taken into account. I think the answer to 20 that is there will be a biological review team --21 MR. ROSENBERG: -- Yeah, I agree. --22 MR. LOWENFELS: -- and a monitoring team 23 and so let's not let that drop. 24 MR. ROSENBERG: Okay, you're right. 25 MR. LOWENFELS: But let's -- we'll have to

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11 work on a mechanism to bring that together because that's how 2 you solve that problem. There are obviously going to be programs 3 that we're going to be developing and working on and funding that at some point in time a reasonable biologist is going to say, 5 this isn't working, we don't need this any more but we need to 6 do it in a different way. I think we're kidding ourselves if 7 we're going to set up something now that's going to work for the 8 next 50 years. This biological review team is going to presumably 9 be given the power to change and so if all of the sudden the sheep 10 multiply 150 times what they're supposed to do, whatever, I don't 111 know, the team can react to that. So I think that's how we take 12 that into consideration.

13 MR. ARMINSKI: Let me ask another question. 14 You look at what's going to happen without the project over a 15 certain period of time and then with the project and I think that 16 even without the project it's obvious that there's going to be 17 increases in population in Alaska, especially in this area and 18 there's going to be substantial increase on the resources up 19 there. Now how do we as Power Authority provide fair compensation? 20 You know, I guess it was always my impression that the rule of 21 thumb is you kind of make up the difference. You know when I 22 hear things like setting aside 35,000 acres of habitat it doesn't 23 seem to give any consideration as to what would happen even without 24 the project. We have to maintain a certain amount of habitat 25 that wouldn't be available even if the project didn't go. We're



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¹ providing excess compensation.

MR. HOSKINS: I think, rather than taking the time here, I prefer to sit down with Dan and you people over here and discuss to get more of the intent of what this paper sis going to do, rather than drag it out in this meeting. If that's appropriate?

7 MR. LOWENFELS: Well, how do the other people 8 in the meeting feel who might want to have some comments on -- It's 9 obvious it's got to be reworked.

MR. ELLIOTT: Yes, some -- In -- You know, heing so close to it a lot of times when I was writing something I'd be like, oh, we kind of talked about this in W-12 and so no elaboration was made on this. I can see a couple of spots in here where to reiterate or bring something back in, but for sure Hank's got -- I mean, my God if he read it and it just took him in a circle then we haven't hit the mark on the nose.

17 MR. ARMINSKI: Dan, do you have any other 18 comments?

MR. ROSENBERG: No, that would be fine.
I don't care how we do it. If you want to rework it and get together and talk about it later on or we could talk about it .
MR. THRALL: Before we move on, if we're

23 going to, just for my own clarification I guess, Hank. Your
24 biggest problem is that it seems to jump back and forth, is
25 that -- ?



MR. HOSKINS: Yes.

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MR. THRALL: Then there seems to also be something mixed in here, maybe Dan or Hank or both of you can comment on that and that is there still seems to be some problem with or -- even our reference in this paper to regulations. Although we've sort of stated that it's beyond the control of the Power Authority but we'd try to recognize it. Is that also a major problem that we even talk about that in the paper or the way we talk about it?

MR. HOSKINS: Just the fact that on page four, the second paragraph, where the statement is made, "The Power Authority recognizes that modification of State regulations regarding hunting and trapping can not be considered as part of the project's mitigation plan." And then it's followed right up with options that may be applicable to the Susitna project and so forth for which the Board & Game might want to consider and it just seemed contradictory the way I read it.

MR. THRALL: In a sense it is contradictory.
We've wrestled with this internally a lot and I think our feeling
is that we'd almost be remiss if we don't at least mention that
as part of the real world because it is part of the real world
and maybe again it's just a question of wording and additional
clarification of wording, which I agree has to be taken up somewhere else. Dan, is that -- do you have that same problem?
Or is it -- I mean, would you prefer -- I guess I'm trying to



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1 say, would you prefer we take everything out and never say any-2 thing about options? I'm just --

MR. ROSENTHAL: -- It's not really -- let me intervene here. It's not really part of the real world. I mean, it's not part of what you can offer. It's out there but it's not something within APA's realm to offer or even suggest as possible mitigation.

MR. THRALL: We're not -- But we specifically say that we're not suggesting it as mitigation, we're just mentioning it as a part of the overall picture. I guess that's where we have a problem seeing why it's wrong for us to mention. It's sort of like we -- at various times you have to talk about what impacts might occur without a project development even though that's not -- as an applicant that's not a part of your job you are expected to do that. We look at this as sort of the same line. Anyhow, I'm not trying to argue it how here. I'm just trying to see what the -- if those are the two major problems and that's what I'm hearing and if I'm correct.

MR. ROSENBERG: I guess I don't see the need to go beyond the first part of that sentence where it just says, 'The Power Authority recognizes that modification of State regulations regarding hunting and trapping can not be considered as part of the mitigation plan, however to help the Board of Game we'd like to suggest the following and I guess I just don't think that that's, you know, really necessary.



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1 MR. THRALL: We didn't say to help the --² We didn't say to help the Board of Game do it's job. 3 MR. ROSENBERG: No. I realize I put those 4 in there. 5 MR. THRALL: I know you did and I think that' 6 a misreading of our intent, which kind of disturbs me. 7 MR. ROSENBERG: Oh, I guess that that's, 8 you know, how I sort of view it. I mean, I think the Board of 9 Game is probably fully aware, can study the situation and get 10 their comments from the public and come up with, you know, what 11 they feel is the best answer to the problem. And I think that 12 if indeed there were to be comments made to the Board of Game 13 on what was felt appropriate you could probably reserve it to 14 that time just because the situation may be -- may be different. 15 MR. THRALL: Well, maybe -- again, I don't 16 think we can get through all this. I'm -- I just wanted to iden-17 tify it and it seems to me that I am correct and that those are 18 the two major problems. 19 I don't look at it as being MR. HOSKINS: 20 wrong. I just looked at it as being inconsistent. 21 MR. ROSENBERG: Yes. 22 MR. FAIRBANKS: I guess I don't see why it's 23 inconsistent to point out some of the of the options that the 24 regulatory agencies have in the future and are likely to take. 25 MR. LOWENFELS: Yes, but here's what -- I



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1 think here's what you should do, these are proposals -- these 2 are ideas which at the proper time someone would bring up. a member ³ of the public or a member of the project team would go to the 4 Board Game and say -- or make a motion or whatever they do and 5 propose a regulation and I think what we ought to do is not in-6 clude this as -- not mention it in reference to a mitigation plan 7 but in fact mention it in reference to monitoring and actions 8 taken as a result of monitoring. Again, we talk about monitoring 9 in a vacuum. If our monitoring reveals something we're going 10 to have to react to that and I don't think there's anything wrong 11 in including a statement then in our monitoring program, we will 12 take into consideration the affects on the sheep and if the 13 affects are X, Y or Z we'll do -- we're going to go to the Board 14 or do something of that sort. I think what your problem is you've 15 mentioned it in terms of mitigation, it's not. It's background. 16 MR. FAIRBANKS: We haven't stated it in terms

17 of mitigation. In fact, we've said that Power Authority can't
18 use that as mitigation.

MR. LOWENFELS: Okay, I understand that and that bothers Hank. I think what you could have said is that we will use these factors in application of monitoring results -- we'll take our monitoring results and perhaps do some of these options. We'll go to the Board. At any rate, we will have to discuss this a little more, but I think that's what we need to do. These things bother you, they bother you that they're out there and we can't



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1 put them in our reports. I think we can. I mean, I think that's 2 something that we offer, Ben. We offer the ability to be -- to 3 go forward to a formal body, propose a regulation if we see a 4 result from our project that requires us to do that. I think 5 that is something that we can offer and I think we should include 6 that at some point in time. It gives you people -- of course 7 it may make Fish & Game feel a little bit uncomfortable to be 8 party to an agreement that suggests at some point in time we will 9 come forward and ask you to pass a regulation or something of 10 that sort, but I think that's one of our responsibilities as an 11 applicant and as a runner of a project.

MR. ROSENBERG: I guess -- I guess the first responsibility, which, you know -- is to try to avoid that situation from occurring and I guess I'm just not sure where we draw the line, where we come to the terms with the reality that there's nothing left to be done and we have to result to that regulatory approach.

MR. LOWENFELS: And who makes that decision. MR. ROSENBERG: And who makes that decision. Veah, exactly. MR. LOWENFELS: Yes, again, my thought is this biological review team --MR. ROSENBERG: -- Can make that decision. MR. ROSENBERG: -- Can make that decision. Now, that's something that I don't -- I guess needs to be discussed more too, the concept of biological review team. I guess I sort



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1 of see it in this paper as for the time being that it's true these
2 regulatory mechanisms are not mitigation and so just leaving well
3 enough alone for now and recognizing that, you know, true regu4 lations may have to be some day changed or whatever and leave
5 it at that. But --

MR. THRALL: -- One of the things about mentioning them there is that we feel -- or at least I feel that it's important. To me that's sort of the safety net that exists or it's one of a set of safety nets that exist. If things go wrong, if impacts turn out to be different than project and worse than project obviously you want to look around and figure out a way to prevent, you know, things from going from bad to worse and while there's nobody recommending that this is the way to go it's just important -- we thought it was important to define the fact in people's minds that there is a safety net there. That it wouldn't be just a case that the whole thing, you know, just continue to -- people would be continued to be allowed to hunt, that something would happen. Otherwise you can --

MR. ROSENTHAL: -- Not as a result of this though. Something would happen because Fish -- in support of Fish & Game is in existance and they ask for that mandate.

22 MR. THRALL: Right. Right. That's under-23 stood. That's understood. But it's just a question of how you 24 paint it and if you leave that out a lot of people could have 25 in their minds a scenario where it just snowballs. All we're



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¹ trying to do is modify. We know this isn't part of mitigation
² and we know that we can't take credit for it but at least people
³ should be aware that there is these sorts of built in institutional
⁴ safety nets that would -- that would prevent that thing from just
⁵ totally snowballing. That's our -- our-- I guess why we see
⁶ a need to at least mention this. Anyhow, I think we've dwelled
⁷ on this enough.

MR. ARMINSKI: Bruce?

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9 MR. FAIRBANKS: One last point I'd just like 10 to make that this paper deals with the effects of -- it doesn't 11 deal with habitat loss or other types of impacts that they Power 12 Authority can maybe mitigate through or by habitat enhancement 13 other places. It deals with the effects of overharvesting, of 14 hunting, the effects and impacts of hunting. Hunting is, in 15 general, beyond the control of the Power Authority so there isn't 16 too many mitigation measures that the Power Authority can propose 17 here aside from just total closure of the access road to the public. 18 And if we go beyond that step then in general it's up to Fish & 19 Game to control or to -- you can look at it as an impact I guess 20 on the animals, you can look at it as a benefit to the users, 21 if the harvest more animals. But I think that's one thing that 22 the paper is trying to point out that there isn't too much that 23 the Power Authority can do about this type of an impact. 24 MR. HOSKINS: Randy, if that's the case we

25 have to delete mitigation measure number four because there it



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1 states that compensation for permanent habitat loss and permanent 2 habitat alteration and so forth as it goes through.

MR. FAIRBANKS: Well, that's just a general mitigation measure that's being used for impacts in general and it will provide some mitigation because we intend to enhance habitat in the project area.

7 MR. HOSKINS: The difficulty I've had, as
8 I mentioned, when I read through here is that part of this miti9 gation statement is that the preservation of important habitats
10 is what I'm referring to when I talk about a bear or furbearer
11 management area that I think should be considered. Then if it's
12 not a way to go or can't be addressed I think it should be identi13 fied and explored.

MR. ROSENBERG: And the other thing is MR. ROSENBERG: And the other thing is the bottom line here is not increased hunting pressure -- what's the issue, it's increased hunting/trapping pressure due to increased accessibility. The bottom line is reduced wildlife population. So what we're mitigating for is not necessarily increased access and increased hunting. What we're mitigating for creased access and increased hunting. What we're mitigating for is reduced wildlife population. I think the -- This is just one way -- one means that -- or that wildlife population are going to be reduced by impacts from the project. So if you look at general mitigation for reduced wildlife population, which say for moose is all the enhancement measures and so on and so forth, I think that that can be appropriate in this paper. I think there



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1 are ways that the Power Authority can mitigate for that. 2 MR. FAIRBANKS: There are other position 3 papers that deal with the habitat loss. MR. ROSENBERG: Oh, granted. 5 MR. FAIRBANKS: This one is supposed to 6 specifically look at the overhunting aspect. 7 MR. ROSENBERG: Yeah, but I'm saying you can look at it from the standpoint of reduced wildlife populations 8 9 and mitigate it from that perspective rather than trying to miti-10 gate it specifically for increased access or what have you. 11 MR. MARCHEGIANI: That's a cause. 12 MR. ARMINSKI: Well, no I think you're missing 13 it because that really is the issue here, the increased access. 14 MR. ROSENBERG: But we can't do much for 15 increased access apparently. 16 MR. ARMINSKI: That's what we're saying, that's 17 probably true. 18 MR. ROSENBERG: But we can do something for 19 reduced wildlife population. MR. MARCHEGIANI: That's in another issue 20 21 paper. That's what we're saying. 22 Okay, so that gets me into MR. ROSENBERG: 23 the whole issue then of cumulative impacts and let's take this 24 impact and put it with that impact when we mitigate for wildlife 25 populations, right?

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MR. LOWENFELS: Um-hm. MR. ARMINSKI: We will. MR. LOWENFELS: Absolutely. MR. ARMINSKI: Bruce? Let Bruce say some-

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5 thing here.

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6 MR. BEDARD: That's the point that I wanted 7 to get across too is someone mentioned about if the project 8 doesn't go there will be significant impacts with or without the 9 project and one of those is land mining entry. On the west side 10 of the project area of Devil Canyon the State is opening up the 11 area to open entry land quite extensively. On the north, northwest 12 part of the project area, both Devil Canyon and Watana the Ahtna 13 Corporation owns over a quarter of a million acres of land. On 14 the interior part, which is the two dam area, the native corporations 15 of CIRI own a quarter of a million acres of land and you're going 16 to have a problem of impacts with or without the project. These 17 lands are going to be open due to the fact of taxation by the 18 Mat-Su Borough and I keep bringing this out. Some things the 19 natives can do along with regulatory authority is restrict off-20 road vehicle use, which we've discussed, require permitting on 21 our land for so many hunters that you would allow to trespass 22 for hunting and fishing, which could be in conjunction with the 23 State regulatory programs to control the number of hunters. We could work out a lot of concepts, but with or without the project 24 25 there will be these impacts and the Denali planning block I look



1 at as the largest impact and BLM has opened up four million acres
2 of land for mining entry and that impact will be far greater than
3 the two dam project. I don't care what anyone says. I know mining,
4 I'm a miner myself and I know what will be done up there.

5 MR. ROSENBERG: What are you trying to say?
6 I mean, I agree there's going to be all kinds of projects through7 out the whole state but we're talking about the Susitna Hydro8 electric project.

9 MR. BEDARD: Well, what I'm trying to say 10 is that these type of things need to be addressed as part of this 11 issue so that the brunt of the impacts are not all really saying 12 that they're going to come from this project. But those that 13 are coming from this project need to be addressed somehow and 14 I don't know how, you know, I don't know how you're going to 15 address them but things are already happening out there that are 16 changing the use of the land.

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MR. ARMINSKI: Ben?

18 MR. ROSENTHAL: Just a question. Where are 19 these other mitigation proposals mentioned? Is it W-9, reduction 20 in wildlife habitat?

21 MR. FAIRBANKS: No, there's quite a few. MR. ELLIOTT: What happened was because of 23 the concerns expressed in the issues when they were made into 24 a list a number of them were broken out by animal of interest. 25 So you're looking at W-1 for moose, W-4 for furbearers and non



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1 _ame birds. There's W --

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2 MR. FAIRBANKS: 2, 3 for black bear and brown
3 bear.

MR. ELLIOTT: 2 and 3 for black bear and
brown bear. I mean, they go down through and a specific species
was drawn out, you know, special interest. So it's not just one
specific one. There is one that discusses the mitigation and
compensation of lands that's one separate one. So I do have to
pull them all together rather than saying there's just one that
deals with mitigation for moose, caribou, Dall sheep et cetera,
they're -- they were just keyed out by that species and say, you
know, this is a species of concern, you know, address this species
specifically. There are a number of them that go down through.
MR. ROSENTHAL: So at what point will they

15 be offered? They've already been offered I take it. W-9's been 16 discussed on March 22nd -- or no, that's -- no March 11th, the 17 follow up meetings were to occur between the 22nd and May 17th. 18 When are these proposals going to be offered for specific dis-19 cussion and review by the intervenors? Specific, mitigative plans. 20 Is this once we've discussed all -- all of the issues? Is that 21 when it's all going to come together?

22 MR. ARMINSKI: Oh, we've already started 23 to discuss the specific mitigation plans.

> MR. ROSENTHAL: We have? MR. ARMINSKI: Yes.



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In what context? When? MR. ROSENTHAL:

MR. ARMINSKI: Well, we drafted a fisheries 3 mitigation plan that was the subject of a technical meeting. 4 We've had a lot of discussions on terrestial mitigation, trying 5 to identify mitigation lands. One of the things we discussed 6 here at the last position paper meeting was how did these papers 7 fit into the overall mitigation plan and I think Jeff summed it 8 up when he said that if you took all the mitigation measures 9 described in these papers and put them all together you'd have 10 a draft or an executive summary of the mitigation plans and that's 11 really kind of the question between these and those final documents 12 which are in development right now.

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13 MR. ROSENTHAL: So the executive summary. 14 is that going to be a summary of these position papers?

15 MR. ARMINSKI: No, the -- Let me say that 16 the final mitigation plans will be a compendium, an expanded com-17 pendium, of all the measures that are discussed in these papers. 18 And part of the intent of this process here is to get the views 19 of all of the parties on whether or not these measures are appro-20 priate.

21 MR. ROSENTHAL: So then the compendium will 22 also be subject to review as well.

> MR. ARMINSKI: Oh. sure.

Oh, absolutely. Absolutely. MR. LOWENFELS: MR. THRALL: Again, we look at this process



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1 we're in right now largely as a consulting process and I think
2 to date Hank has made a suggestion, a specific suggestion ,about
3 35,000 acres of land that would be set aside. This is exactly
4 what we're looking for. I think to date that's the only specific,
5 and I may be wrong, suggestion we have received from anybody on
6 mitigation.

MR. ROSENTHAL: You're probably right.

8 MR. THRALL: But we would like to and I'm
9 just -- We, to a certain extent, feel very uncomfortable at a
10 technical level in that we are being asked sort of you guess what
11 we want to see for mitigation and if you don't guess right we'll
12 take a big shoe and hit you.

7

MR. ROSENBERG: Well, no I -- I -- I don't 14 think that's quite fair.

MR. THRALL: Let me finish, Dan, because I'm simply expressing to you our view of the world and that's one of the purposes we have here. We tell you our view and you tell us, gee, it doesn't look like that to us at all. But we would love to have all of you come here and say, you know, we read this mitigation paper or this position paper and you mentioned certain things about mitigation, in general terms, very general terms, and we thought about that, you know, specifically, you know, because of our own agency's interest and our own knowledge of something that's going on and gosh, it would be nice if you would think about including in that mitigation this or that or



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1 the other thing. We would love to have that. It would help us
2 in developing it. Now, we also realize, and we hear from you,
3 that, you know, I'm up to here with paper, we have other projects,
4 we don't have a lot of money and it's hard for us to do. So I
5 don't know what the solution is but I don't know how else we could
6 approach it. We would really hope that we somehow can get more
7 input.

8 MR. LOWENFELS: Although, I must say, Dan, 9 I think your input has been excellent and your suggestions, I 10 think, for the most part have been taken and put into the revised 11 papers. I mean, I'm not the scientists but I think the criticisms 12 that have been coming and the suggestions that have been coming 13 from Fish & Game have been --

MR. THRALL -- I'm not saying that -- I'm 15 not criticizing anybody.

MR. LOWENFELS: Okay, I just wanted to mellow 17 out the tension here a little bit.

18 MR. THRALL: I am pointing out our predicament 19 and the world as we see it, from a technical level again.

MR. ROSENBERG: Just to say something. Like for instance, on the W whatever it was, what was it,W-2 we had the last time on brown bears? I mean, we've suggested Prairie Creek over and over and over again. Prairie Creek wasn't even mentioned in that paper. We've got a map that we presented at the meeting that Tom was referring to that had a big outline



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1 on it of the area of Prairie Creek. Now, just as an example, 2 there was something I think fairly specific that I think we men-3 tioned and I never saw it come up in the position paper on brown 4 bear.

MR. FAIRBANKS: It was in there but it was in a generic sense. We didn't want to be specific about it because we don't know if we can do anything yet. We are working on trying to develop something with native corporations and since --

MR. ROSENBERG: -- Okay, so there's -- the problem is, you know, not specific to anyone. You keep throwing specific at us.

MR. LOWENFELS: It's communication.

13

MR. THRALL: Let me retract and apologize, MR. THRALL: Let me retract and apologize, Dan. You've talked about Prairie Creek and you've talked about clearing off areas for -- for the mineral licks so I was wrong. I was -- You have made some specific suggestions but we'd like more of them.

MR. ROSENBERG: No, I think -- I think that it's a two way street. We both have situations where we both say, please be specific and then we can't be too specific and we say the same thing to you and I -- we think -- I recognize that.

24 MR. THRALL: Yes. We are in fact as a result
25 of your suggestion, as Randy pointed out, we're now sitting down



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1 and dealing with the land owners and trying to develop something 2 on Prairie Creek. So we are pursuing it. We really do intend 3 to follow through.

MR. LOWENFELS: Dan, you'll also get a chance when that -- when this -- when these executive summarized, little, sanitized bullets are put into a plan you're going to have a chance to sit there and and have it et cetera, et cetera. So I mean, this is not your only chance, but I think the earlier you get it in the easier it is for Harza-Ebasco.

10MR. ROSENBERG: I agree with that.11MR. LOWENFELS: I think that's the bottom12 line on that one.

MR. ARMINSKI: I don't know what -- You know I4 I'd almost say don't pay too much attention to these. I mean, I5 really, because this is not --

16 MR. LOWENFELS: -- Wipe that off the record,
17 please.

18 MR. ELLIOTT: Now, from somebody who is 19 writing these things I really have a problem with that.

MR. ARMINSKI: I mean, you know, these are very brief and these don't portray all the activity that's going on with respect to these things. I mean, we've had numerous meetings with the native land owners there to try and work out something on Prairie Creek. I mean, days of meetings with these people and that's not reflected in the papers. I mean, you couldn't



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1 reflect that in the papers.

MR. LOWENFELS: But it will be in the next one. I mean, in the so called final draft. Not final draft, we won't use that word final. In the next level of discussion draft I guess. You know if you can think of a better way to do it, tell us.

7 MR. ROSENBERG: I think that's a fair question.
8 I really do think that things are going pretty well. I really
9 do. I think we've come a long way.

MR. ARMINSKI: I mean, if you want a big 11 paper like this on each one.

MR. LOWENFELS: I might also add that Fish
6 Game, and I think you're copying everybody else and I think
8 Brad, you did it once and I don't think you've done it since,
9 maybe since you were on vacation or something, you follow up with
9 some written comments. Carl sends them out. They're very spe9 cific, they're very good and they come out before we get the trans9 cipt back so we can really get a quick turn around. And Hank,
9 you've done it also I think. No?

20 MR. HOSKINS: I've written, that's why I 21 take to reading it into the transcript.

MR. LOWENFELS: Okay. We should get those yellow sheets from you when you leave. What's the next -- ? MR. ARMINSKI: I'm afraid to go on. Can ..e go on? Let's see, Rick are you going to take the next one?



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1	MR. SUTTLE: It's his.			
2	MR. ARMINSKI: Oh, Chuck.			
3	MR. LOWENFELS: Can you handle it, Chuck.			
4	MR. ARMINSKI: Maybe he slipped out. Signi-			
5	ficance of changes in commercial opportunities related to fishing,			
6	hunting and trapping. It's our position that be adopting the			
7	mitigation measures referenced in the paper the project impacts			
8	on commercial opportunities related to fish and wildlife will			
9	be insignificant. Chuck?			
10	MR. ELLIOTT: Dallas.			
11	MR. ARMINSKI: Dallas.			
12	MR. OWENS: Okay, we identified two types			
13	of commercial uses that now exist. One type is the direct harvest			
14	of the fish and wildlife resources such as fur animal hunting,			
15	trapping and commercial fishing. The second type is the provision			
16	of services for either consumptive or non consumptive uses of			
17	the resources such as guiding, air taxi services and lodge operator	s.		
18	We tried to examine the kinds of effects that the project could			
19	have on commercial uses and resource through two ways, the effects			
20	of the projects on the populations that are being used and effects			
21	through access to those populations. Our primary data sources,			
22	at least with the first part, the type about the type of commercial			
23	use that has to do with populations comes from wildlife and fishery			
24	literature. The second type, effects on the service providers,			
25	comes from a series of specialty population surveys that we			

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1 conducted with trappers, guides, air taxi operators and lodge
2 operators. Comments?

MR. LOWENFELS: Tom.

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MR. ARMINSKI: Bruce.

MR. BEDARD: Again, I just wanted to bring
some points out. The existing commercial operators that are using
the native lands will be again shortly notified that they are
in trespass and will have to cease their operations, if that will
minimize some of the impact I don't know. But we do know that
they are using Fog Lake, areas of Stephan Lake and even Portage
Creek for guide services as well as bringing European clientele
to these special places. They have cabins, cleared camp sites
and things like this and we're going to inform them that that
has to cease. The other thing is that --

MR. ARMINSKI: Bruce, may I ask you a question, 16 please?

MR. BEDARD: Yes.

18 MR. ARMINSKI: Would they be allowed to con-19 tinue under a permit type of thing?

MR. BEDARD: We're looking at that as a possibility but you also -- the realism is that we will be competing there. Our intent is to open our own lodges. and when -- I mean, let's face it, Stephan Lake Lodge only owns 10 acres of land and is using all the native land surrounding it. And if that is cut off from them, they're out of business. That's realism. But



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lour intent is to open a similar lodge on the north end of the ² lake.

3 MR. ARMINSKI: So you'll be the commercial 4 operators that we're talking about in this paper.

5 MR. BEDARD: But there may be some give and 6 take on that. We'll talk to the lodge owners, see what they have 7 in mind. If their intent is to shut down or even want to sell 8 out we may even do that. I don't know yet.

9

MR. LOWENFELS: So you will replace them. 10 MR. BEDARD: Yes, more or less. I just wanted 11 to bring that point out that the native land will alter some of 12 this commercial activity that's been taking place up there. Some 13 of the guides have claimed exclusive rights which they don't 14 really have, not any more anyway. That will change because of 15 land ownership. Whether the project goes or not it is the intent 16 of the native corporations to eventually bring in their own roads 17 for that development. CIRI has other plans. They own the -- I 18 can't speak for CIRI so . . . I do know that they have some 19 minerals that they're aware of up there that they intend some 20 day to open up. You have, at least at this time, two village 21 corporations that definitely will have land in that area, both 22 their plans are somewhat different. Tyonek plans are to open 23 lodges. Knik I don't know at this time what their plans are. 24 We have looked at sort of an overview. We're looking at future 25 demands of that area for hunting, fishing and this kind of stuff.



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1 We have our concerns about overuse and we definitely will restrict 2 ATV's. That's been brought out several times. You do mention 3 in here that the native corporations are in the best position 4 to beat this demand and this is possibly true. As Tom has mentioned, 5 we are addressing those type of things of how our recreation plans 6 can be incorporated with the project if the project goes or even 7 if it doesn't go our plans are to do the similar thing. On page 8 six you mention in here that between five and 10 big game guides 9 may find that their guiding areas can be reached by day hunters 10 from the access road. Are you looking at that as an impact to 11 the guides? Because their area is going to be impacted anyhow. 12 That's the only point I was trying to get across on that. If 13 the guides feel they're going to lose some specialty because of 14 an access road they're going to lose it anyway. We might as well 15 face realism on that. 16 MR. ARMINSKI: Well, there's a lot of public 17 land adjacent. 18 MR. BEDARD: Pardon? 19 There's a lot of public land MR. ARMINSKI: 20 adjacent to the access roads. 21 MR. BEDARD: Well, the Ahtna Corporation owns over 300,000 acres between Cantwell and 35 miles south of 22 23 Cantwell and 18 miles east of Cantwell. CIRI starts roughly about 24 six miles this side of Gold Creek, which goes about 10 miles, 25 you know, width and when you get into the Stephan Lake, Susitna



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l River area it's about 50 miles. Then it goes all the way out 2 Watana Creek. You're talking quite an area of land that either 3 Ahtna or CIRI or the villages have some plans of development. A lot of it will be recreational development, commercial activity. 4 5 The biggest concern I have is not necessarily the native develop-6 ment and that's the big mining possible development that would 7 occur north of the river from opening that whole are to mining. 8 That could screw up the whole area far worse than the native 9 development or the two dam project. I'd just like to get that 10 point across. BLM has already done it so people are already filing 11 claims so I know it's going to happen, it's already happened. 12 I hate to see that happen because of the Nelchina herd. It will 13 have an impact on that. You get that surface mining operating 14 on a mass scale it's going to be a bad situation. But other than 15 that, I just wanted to get that across that the native's desires 16 are that type of development at this time. I can't speak for 17 CIRI because I don't know what their plans are.

18 MR. ARMINSKI: Any other comments? MR. ROSENBERG: I have a comment on page 20 four, on number one, effects on fish and wildlife populations, 21 line three. I have a problem with the statement, "With regard 22 to salmon, the conclusion is that even without mitigation the 23 project would only slightly reduce the populations downstream 24 from the dams" I just don't think that statement can be made. 25 I think that should be scratched from -- unless you can support



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1 lit. 2 MR. THRALL: You mean speaking about the 3 minor effects on rainbow trout populations? 4 MR. ROSENBERG: It says, "With regard to 5 salmon . . . the conclusion is that even without mitigation the 6 project would only slightly reduce populations downstream from 7 the dams". 8 MR. OWENS: Yes, I don't think there's any 9 problems with that because with the mitigations that will be adopted 10 and considering the percent of the commercial catches that come 11 out of the river anyway I don't think that statement has to be 12 in here to make the point. 13 MR. ROSENBERG: Yeah, I don't think it's 14 a question of that, I just don't . . . 15 MR. MARCHEGIANI: What do you consider signi-16 ficant? 17 MR. LOWENFELS: Oh, oh. 18 MR. ROSENBERG: Okay, Eric, what do you con-19 sider slightly reduced populations downstream from the dams? 20 MR. MARCHEGIANI: Well, if you take a look 21 at the Susitna population being maybe 200,000, 300,000 and you 22 figure that we're dealing with 10,000 chum, plus or minus if you 23 want to double it, you know, what percentage is that is considered 24 significant. I don't think we really want to get into a dis-25 cussion.



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MR. ROSENBERG: We don't. We don't want MR. ROSENBERG: We don't. We don't want to get into that we'd go on forever. I just don't think it's an appropriate statement to be made in here.

MR. LOWENFELS: We're going to take it out.
5 It's coming out.

6 MR. ROSENTHAL: There's a reference here 7 on page two that 10 to 88 percent of chum and king salmon leave 8 Cook Inlet so I guess that would be, you know, a significant 9 contribution to that commercial fishery and to say that there 10 is no impact from the project you have to be -- of supporting 11 that. And that's one concern that our agency has is the effects 12 on the commercial fishery and we'd like to see an analysis. If 13 you don't put it forth we will somehow machinate one.

MR. ARMINSKI: Well, we've done an analysis basically that -- and I'd have to say that it's fairly cursory and it's been distributed to the Mat-Su Borough, they asked for this. They wanted to know what the impacts on commercial fishery would be and we did -- it basically was a worst case analysis of the project without mitigation.

20		. ROSENTHAL:	What format is that presented?
21		ARMINSKI:	It's a letter to the Borough.
22		. ROSENTHAL:	Can we see that?
23	MR	. ARMINSKI:	Sure.
24	MR	. ROSENTHAL:	Can you send us a copy of

25 that?

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1 MR. ARMINSKI: Um-hm. We've also discussed ² this in public meetings we had last May. I think it maybe even 3 been one of the first workshops we had. Bruce Barrett (ph) talked 4 about this. 5 MR. LOWENFELS: Do we have a transcript of 6 that? 7 MR. ARMINSKI: No, we've got meetings notes, 8 I think, but we don't have a transcript. So it's been discussed 9 in the past. 10 MR. ROSENTHAL: Can I get a copy of those 11 transcripts? I don't have the workshops either. 12 MR. ARMINSKI: Um-hm. 13 MR. ROSENTHAL: We would like to see more 14 of an analysis done on the effects to the commercial fisheries 15 and especially in light of the different water flows. We can 16 bring that up later. We think -- We believe -- Our agency's view 17 is that that type of analysis ought to be considered and incor-18 porated into the economics of the project. When you consider, 19 you know, in addition to power sales so when you do your economic 20 analyses that is one part of that economic analysis, incorporation 21 of the commercial fishery, the dollar value there. 22 MR. ARMINSKI: Of course our intent is not 23 to diminish the commercial fishery. 24 MR. ROSENTHAL: Right, but in your analysis 25 -- I'm just referring back to this -- these -- the alternative



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1 water flow scenarios that you mentioned in your discussion on 2 December 11th and I'm just wondering whether that part of the 3 economics was taken into account in the analysis of the economic 4 feasibility of the different water flows or if it was just basi-5 cally a power consideration.

MR. ARMINSKI: If you look at the analysis of the different flows you'll see that there's figure attached with each of those that relates to the cost of mitigation to provide for fisheries and all the way from, I can't remember what the cases are anymore, the pure power down to basically run of the river.

MR. ROSENTHAL: Cost -- You mean cost in 13 the operation mode of mitigation? What it's actually going to 14 cost in dollars to mitigate.

MR. ARMINSKI: That's right.

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MR. ROSENTHAL: I'm saying include the dollar 17 value of the fish effected.

18 MR. MARCHEGIANI: How do you want to incor-19 porate that?

20 MR. ARMINSKI: Yes, if you don't -- if there's 21 no loss to fisheries through your mitigation --

22 MR. ROSENTHAL: -- If there is no loss then 23 there is no dollar loss.

MR. ARMINSKI: That's right.

MR. ROSENTHAL: I mean, but you're assuming

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1 that there is no loss and I'm taking the assumption that there
2 may be a loss. And if there is I'd like to quantify the dollar
3 value if there is a loss.

MR. ARMINSKI: How can we access the loss? MR. ROSENTHAL: Well, the Case E-6 assumes only 75 percent -- is managing for 75 percent habitat.

MR. ARMINSKI: That's worst case though. MR. ROSENTHAL: That's the worst case? MR. ARMINSKI: In fact, we expect an enhance-

10 ment.

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MR. ROSENTHAL: What is dollar value attri-12 buted to that worst case loss?

MR. GILBERTSON: The thing that you're asking
for, maybe the agencies could give us a little guidance on this
because similar subjects have come up a few times in these position
paper meetings. You've approached this subject several times
and it's a real fuzzy, gray area. We've been working, we thought
under agreement by everybody, on a habitat oriented analysis.
Now, some of these things that you're asking us to do you're asking
us to deal with populations, numbers of fish and that really is
a whole different arena.

22 MR. ROSENTHAL: So it's not do-able then 23 or -- ?

MR. GILBERTSON: No, I'm not saying it's 25 not do-able, but -- but the analyses and your mitigation requests



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and things like that have focused on habitat. Now it is going
to be a whole new analytic process to start converting these
habitat analyses into populations and I don't know if Hank or
Brad may have some comment on it, but it really does open up a
whole new arena of analytic procedures and it's probably less
-- it's a lot less refined and in my opinion a lot less accurate.
MR. ARMINSKI: Yes. The direction that we've

8 got from the agencies in the past is always, do a habitat based 9 analysis because to do it based on population is -- you're subject 10 to cyclical variations in populations and you may not be compensa-11 ting based on, you know, what might not be an optimum population 12 or a sustained population, whatever. So for probably the past 13 five years or so we've been working on a habitat base assessment 14 in mitigation plan.

MR. ROSENTHAL: Well, not that the -- excuse me from breaking -- parting with tradition, but I think when you discuss, and I think it's more probably basic to the actual water flow discussion, when you discuss feasibility of the project and the cost of certain flows I think it's crucial that you have to incorporate commercial dollars lost to the fishery in that analysis and take it into account.

MR. MARCHEGIANI: I think that you're -the policy that we have is no net loss that's what we're striving for and that's what our mitigation policy states. I mean, if you want us to put a dollar value on commercial fish we could



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1 do that -- I mean, it's not that we don't want to do that, I mean
2 physically it's possible --

3

MR. ARMINSKI: -- We have done it.

MR. MARCHEGIANI: And we have done it, right. I don't think you -- to be perfectly honest with you, I think if we get into a situation where we start talking about numbers of fish and cost I think the resource is going to lose out. That's my own personal opinion. I think you're going to lose out. I think you're better off dealing with habitat and --

MR. ROSENTHAL: -- I'm not saying don't deal with habitat. Deal with habitat and deal with the actual, you know, fishery compensation as a part of that habitat measure. I'm just saying, don't look at one at the expense of the other, look at both.

15 MR. ARMINSKI: Well, what kind of level of 16 detail do you want? I mean, we, you know, we can say that if 17 the flows are such and such based on the historical data we've 18 got so many fish are not going to make it into certain sloughs 19 and based on that you're not -- your production is going to suffer. 201 We've got that kind of stuff available and we could put a dollar 21 value on those fish I think and provide that to you. But I think 22 we're really hesitant to go into an exhaustive analysis of --23 a population based analysis because of fisheries impacts. 24 MR. THRALL: One of the things that happens

25 when you do that is you say, okay then you put a dollar value



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1 on those fish that don't make it in a slough because of whatever ² and then you start looking at the amount of money on flows to 3 maybe mitigate and the imbalance is tremendously in favor of forgetting the fish and not providing the flow. And we have gotten 5 extremely strong signals from agency people that they are very 6 uncomfortable with that approach and we are trying not to take 7 that approach. We can put a dollar value on salmon. I mean, 8 there are all kinds of fisheries economists who will say every 9 salmon is worth, you know, so many bucks. That doesn't really 10 get us too much because then we still have to go through the pro-11 cess of habitat based analysis and we -- what we're shooting for 12 is a mitigation that in the end there will be no net loss or even 13 an increase in total production so that that dollar value sort 14 of becomes meaningless, unless you use it -- the only place it 15 becomes meaningful, in my mind, is if you use it as a trade off 16 for how much you want to spend on mitigation. And we have not 17 wanted -- Well, it's been bandied about and numbers have been 18 kicked about but generally I think the Power Authority has not 19 "one that route. They have not wanted to say, look, let's just 20 do a sort of simple dollar for dollar trade off. If we impact 21 X million dollars of salmon resource we'll spend X million dollars 22 in mitigation because the balance there is way out of kilter. 23 MR. ARMINSKI: I think if, and I'm sure Brad 24 has been through this and I don't know if Dan and Mark had been,

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25 but I have, when you try to put a dollar value on fish and, you

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1 know, mitigate based on that dollar value the resource always ²loses. I mean, the fish just don't have that kind of value. 3 MR. ROSENTHAL: But I think you take the 4 assumption that the resource won't lose, the applicant is changing 5 the status quo so the applicant has to mitigate, okay. But in 6 addition to that mitigation it has to minimize cost to the fishery 7 MR. ARMINSKI: We're doing that. 8 MR. ROSENTHAL: Dollar cost. 9 MR. ARMINSKI: We're doing that. 10 MR. ROSENTHAL: So when you look at the 11 different flows then you -- you manage the flow that will have 12 the least cost to the commercial fisheries basically. That's 13 how I would look at that. 14 MR. ARMINSKI: Well, I think the least cost 15 to the commercial fishery would be to build a hatchery because 16 our cost, you know, opportunity lost providing flows is -- far 17 exceeds the cost of hatcheries to provide for commercial fisheries 18 MR. MARCHEGIANI: You don't want that. Ι 19 mean, you want natural production. I think what you're going 20 to end up finding then is if we pursue the avenues you want you're 21 going to force us to lay out the numbers on the table and some 22 other people are going to come along and grab those numbers and 23 they're going to say, this is crazy. We aren't going to turn 24 around and spend this kind of money to maintain natural stocks. 25 What we'll do is we'll just build a hatchery, it's a hell of a



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1 lot cheaper. That's where we were four years ago. We're trying
2 to avoid that. If we turn around and put a dollar amount,
3 commercial fishery dollar amount --

MR. ROSENTHAL: -- I'm not saying dictate 5 -- let the economy dictate the most efficient manner of mitigating 6 it and make objective, you know, determinations. I'm just saying 7 minimize the cost to the commercial fishery by incorporating that 8 cost in one of -- as one of the economic guidelines in water flow. 9 I don't know if that's been done. I think, you know, when --10 MR. MARCHEGIANI: -- If you balance the 11 commercial fishery cost versus power cost you're going to find 12 that there's no way that they're going to turn around and balance. 13 You're going to find that the power benefits are going to far 14 exceed commercial value. 15 MR. ROSENTHAL: I'm not -- I'm not saving 16 balance it. I'm saying include that cost. 17 MR. SCORDELIS: Ben, I'm a little confused. 18 What do you -- Where is this loss to the commercial fishery? 19 Where is that coming up? From lost fish? 20 MR. ROSENTHAL: From lost fish. 21 MR. SCORDELIS: That will be taken care of 22 by the mitigation measures. There will be no net loss to the 23 commercial fishery. Mitigation will see that that doesn't happen. 24 MR. SMITH: Yeah, we're going to continue 25 to work and to comment on Case F-1 using that assumption that



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1 we're not going to have any net loss to the fishery and hopefully 2 that will avoid or render the point mute as far as the what the 3 impacts of commercial fishing are. I haven't been through this because I've been away, but one thing I was wondering about, even 4 with the no net loss we have selected certain species for evaluation 5 species, certain species that have been pre-selected because of 6 their use of the main stem or their -- the likelihood that they 7 will be impacted and looking at the chums. Is there any con-8 g sideration that with -- even though you're going to be maintaining 10 on a poundage basis or a bio-mass basis you're either going to maintain or enhance salmon production in the middle river, has 11 anybody followed up on whether those species are -- how they would 12 effect the commercial fishery? Would -- You're going to try to 13 maximize chinooks, well are chinooks the big catch species for 14 the upper Cook Inlet or would -- do they concentrate heavily on 15 sockeye and the relative loss of sockeye would actually have a 16 greater effect on the commercial fisheries than increased numbers 17 of chinook. 18

MR. GILBERTSON: We're going to try to maintain production of all five species at or above their present levels. We picked chum and chinook as principal evaluation species because we saw those as being the most sensitive species to alteration and main stem flow. It was really a judgment that we saw would be most effective and most efficient to use to protect chinook rearing habitat. That wasn't -- The flip side of that



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1 coin wasn't saying that therefore we will -- we will trade off 2 some chinook production for chum production. The goal is to also 3 maintain chum production. It was just simply a judgment on our part that the best use of water was for chinook rearing. The 5 goal is to maintain production of all five species, salmon species 6 MR. SMITH: In addition to going --7 MR. GILBERTSON: -- In addition to the resi-8 dent species. 9 MR. THRALL: Again, if you protect the chum 10 habitat you're essentially protecting the sockeye. 11 MR. GILBERTSON: Right. And numbers of fish. 12 even though we're focusing on habitat in our impact analysis and 13 our mitigation plan, actual numbers of fish, to me, aren't lost 14 in this process because as we start going through a monitoring 15 plan I think what we're doing -- I think we're all going to agree 16 is the way you monitor the effectiveness of our mitigation plans 17 is by following numbers of fish. It's not by going out and 18 measuring the hydraulic characteristics of habitat with the pro-19 It's monitoring our mitigation plans by monitoring the ject. 20 production of the system in numbers of fish. 21 MR. SMITH: I think that 75 percent figure 22 continues to get us into trouble. 23 MR. ROSENTHAL: Yeah. 24 MR. GILBERTSON: In retrospect, it was too 25 bad that we used that approach in describing what we're talking



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1 about because again, that 75 percent number was an estimate that 2 we used of the rearing habitat that exist and are used under 3 natural conditions that would be maintained under with project 4 conditions. The 75 percent did not include the establishment 5 of what we call, maybe a little loosely. replacement habitat at 6 the lower, more stable flows. So the net effect of Case E-6 we 7 expect to be maintenance of production of rearing habitat at or 8 near its present levels.

MR. GILBERTSON: Of area of habitat. We're assuming a link between habitat and numbers of fish.

MR. ROSENTHAL: Of numbers?

MR. ROSENTHAL: Well, if you've got -- Well, is it conceivable that you'll get unutilized habitat?

MR. MARCHEGIANI: Sure.

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15 MR. GILBERTSON: I don't think -- In the 16 case of chinook rearing I really don't think so because if you 17 look at -- if you look at the way the chinook are utilizing the 18 side channel and slough habitats in middle river right now is 19 that they're a very mobile force out there. They move around 20 as the flow in the main stem goes up and down and these side 21 channels become good and marginal these fish do move around from 22 side channel to side channel.

MR. ROSENTHAL: Well, what is -- What would
be proper reaction to decreased numbers? Just descreased numbers,
unutilized habitat then what will be put in place? Will we have



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1 a fall back mechanism to allow for the, you know, the management 2 of specific numbers of fish?

MR. GILBERTSON: I can answer that yes but
my -- that answer is based on a little bit of speculation as to
what I expect the mitigation and monitoring plan to look like.
I expect that plan to have some contingency in it.

7 MR. ARMINSKI: You know I think it's incum-8 bent upon the people that we deal with to try and identify what 9 are the what are the appropriate fall back measures. You know, 10 if we can't maintain fisheries through flows for some reason it 11 just doesn't cut it, you know, we may have to put in a hatchery. 12 I don't think that the State of Alaska's is going to open the 13 gates up on the multi billion dollar project. It just doesn't, 14 you know, I don't think --

MR. ROSENTHAL: -- The State may not but in a license proceeding as a stipulation to that license the State will be required to open the gates. I mean, if we can show that that's necessary --

MR. ARMINSKI: -- Well, but what I'm saying
is there may be other reasonable alternatives than opening the
gates.

MR. THRALL: I guess I'm a little bit confused because we have made the assumption, and it's I think generally accepted as a biologically valid assumption, that if the habitat is there, if we provide the habitat for the fish then



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1 the fish will continue to use it unless some other totally
2 external factor does something.

MR. MEARS: That's the point I want to make 3 is that the assumption in the monitoring program is that you 4 -- apparently is that you're going to use numbers of fish some-5 how to give ourselves a grade as to how well we're doing. 6 If numbers of fish is not the basis for the mitigation plan in the 7 first place then I don't think you can use numbers of fish --8 I'm not saying you're wrong not to use numbers of wrong as the Q basis for the mitigation plan but I don't think it evaluates the 10 success of the mitigation plan in numbers of fish because I fore-11 see in the future, let's say the dam's built and the sloughs are 12 dug out and we're going along, you know, we've done what we think 13 we can do, there's still going to be cold winters, there's still 14 going to be floods, the Japanese and the Koreans and so on are 15 still going to be trucking around out there in the North Pacific 16 and the fish are going to come back in the summer time and ADF&G 17 will have openings and closings and when it's all over we'll look 18 at the number of fish that came back and say, well, either that's 19 good or bad and then we'll sit and argue for the rest of our life-20 times about why it was good or bad. 21

22 MR. GILBERTSON: One of the things we're 23 going to try and incorporate into this mitigation and monitoring 24 plan is -- are some control mechanisms so we can separate the 25 effects of the project and the effects of some of these other



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1 things like increased ocean fisheries and things like that. But,
2 I mean, we can -- it would probably be simpler as a matter of
3 fact, we could monitor the project by going out and measuring
4 habitats the same as we measured pre-project. But I think that's
5 divorcing ourselves from the thing that you're really interested
6 in and that's numbers of fish.

7 MR. MEARS: I agree with you, that yeah,
8 I'm interested in numbers of fish but given the complexities of
9 trying to -- trying to adequately enumerate them and adequately
10 explain their abundance or lack thereof, you know, I guess I'm
11 willing to settle for let's make habitat and let's make sure that
12 it stays good habitat and I think that's all you can accomplish
13 with this.

14 MR. THRALL: I quess the part of it. and 15 there's two sides to it, the Power Authority I don't think feels 16 that if something happens in the fishery to reduce numbers of 17 fish that the Power Authority then should be on the hook to replace 18 those fish. In other words, an impact totally divorced from 19 the project. If for some reason there's tremendous overfishing 20 and you start to get very low returns the Power Authority doesn't 21 want to be hooked into some number --

MR. ROSENTHAL: -- Well, we're not asking
the Power Authority to do that. We're not asking the Power
Authority to manage the off-shore fishery or the in-shore fishery.
MR. THRALL: But are you asking them to



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1 replace the loss? 2 MR. ROSENTHALL: The loss. The loss. 3 MR. THRALL: The loss due to the fishery? MR. ROSENTHAL: The loss due to the project. 5 And that's all we're asking and to compensate for those losses. 6 And I'm not sure whether just mitigating for habitat will get 7 to, you know, will replace that loss. 8 MR. THRALL: That's the only thing --9 MR. ROSENTHAL: -- And if it doesn't, if 10 it doesn't I'd like to see an economic quantification of what 11 numbers are estimated to be lost under the different water flows 12 so that we can maybe from that determine what would be the best 13 overall flow for our purposes. 14 MR. THRALL: If the habitat is the only thing 15 the Power Authority is affecting by the project then it's the 16 only thing they can replace by the project. I guess that's the 17 -- where I'm confused. 18 MR. ROSENTHAL: But the part of compensation 19 takes into account, you know, provocation. 20 MR. THRALL: Okay, again, then you fall back 21 to the hatchery. 22 MR. ROSENTHAL: That's not habitat. 23 MR. THRALL: Then you fall back to a hatchery 24 or a spawning camp, which have been provided for as sort of safety 25 nets but have been agreed upon by everybody as being sort of

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1 undesireable. I think we're talking about the same things maybe 2 it's just a question of . . . 3 MR. LOWENFELS: Why don't we provide Ben 4 with the information that we provided the Mat-Su Borough and any 5 other information we have and then I think we need to continue 6 the discussion. 7 MR. ROSENTHAL: Yeah. 8 MR. LOWENFELS: Does that make sense? 9 MR. ROSENTHAL: Okav. 10 MR. SMITH: Did that letter assume impacts 11 to -- did that assume a no net loss and then you just worked up 12 what the cost of fish would be or did it actually come to a con-13 clusion about project specs? 14 MR. ARMINSKI: I think. Brad. and it's been 15 about a year since we put it together, but my recollection is 16 that it kind of took the total Cook Inlet fishery and the con-17 tribution to that from the Susitna River and then the contribution 18 it broke out the contribution from the middle reach and showed, 19 I'm pretty sure, what the total loss to the fishery would be if 20 you lost all the fish from an unmitigated project. 21 MR. ROSENTHAL: How about in light of Case 22 E-6? 23 MR. ARMINSKI: No, it didn't consider any 24 compensation or anything. 25 MR. SMITH: I'll bet at that time, if it



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1 was done over a year ago, that it basically dealt with slough 2 spawners and not with rearing -- potential for tributary spawning 3 chinooks to be lost.

MR. ARMINSKI: That's probably the case.

MR. MARCHEGIANI: That would still be a valid assumption today. You wouldn't lose your tributaries, -theoretically at least everybody has come to the agreement that tributaries are going to cut down -- they're still going to make it into the tributaries, et cetera.

10 MR. SMITH: One thing that I'm a little con-11 cerned about with these discussions is whether it assumes cer-12 tain conclusions that are going to be coming out of the 13 flow relationships. Some of these refine discussions of habitat 14 requirements for different species. I don't know that that's 15 the case. I think there's very informed opinions for guess that 16 we are going to have improved conditions out there but they haven't 17 been brought before us yet. So we can only go so far at this 18 time in agreeing that there won't be effects to commercial fishing 19 operations. If something would change, like there is a problem 20 with winter temperatures or something then certainly we'd want 21 to see some economic evaluation of the loss. But beyond that 22 we don't want to get away from habitat based evaluation.

23 MR. ROSENTHAL: I would just like to see
24 some comparative data determining the loss in dollars to the
25 commercial fishery under different flow scenarios, including



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1 habitat, assuming that you're going to mitigate for habitat. 2 I'm not asking you to change your objectives in mitigation I'm 3 just saying I'd like to see the dollar value. MR. THRALL: Again, there's a logical incon-5 sistency in what you're asking. Because if we mitigate for habi-6 tat we have to assume there will be no loss of fish. So I think 7 what you're really asking for is some sort --8 MR. ROSENTHAL: -- That's your assumption. 9 I mean, if that's what's going to happen. 10 MR. THRALL: Well, that's sort of, in my 11 mind, a biological principle. 12 And you're right, when we signed MR. SMITH: 13 off on the habitat based evaluation one of the underlying assumptions of that is that habitat units don't necessarily relate 14 15 to numbers of fish. It's just, you know, an inherent part of 16 that process. So I don't know if you can ever -- pick up how many fish and then put a dollar value onto it when we're this 17 18 far into a habitat based . 19 MR. MARCHEGIANI: Maybe the answer to your 20 question is more of a sensitivity analysis. What you'd like to see us do is if you lost 10 percent or 20 percent what does that 21 22 mean commercially. Because what you've been saying is, you know, 23 what happens to these six, what happens to this or that and that isn't -- I mean, our intent is that there's no net loss and we're 24

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25 going to basically have the fishery that's there today will be

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there in the future. That's our goal. Now what you're fighting with is the uncertainty of does that mitigation measure actually happen, does it physically occur, do we actually end up with a production. And what you're really asking is what is -- a sensitivty analysis. What happens if we lose 10 percent, what happens if we lose 20 percent and maybe that's the way that we can address your question.

That we can do, as I said.

9 MR. ROSENTHAL: And then I guess one step 10 further I'd like to suggest that -- as a stipulation that we re-11 quire management towards certain numbers. I mean, at least -- 1 12 know that you can't isolate -- well, you can to some extent iso-13 late the off-shore, in-shore fisheries from -- from, you know, 14 the in-river fishery by using, you know, harvest numbers, catch 15 data.

MR. THRALL:

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MR. MARCHEGIANI: That isn't our job. That's MR. MARCHEGIANI: That isn't our job. That's Dan's job. You're throwing the ball at me to turn around and manage the fishery, I can't manage the fishery, Fish & Game's going to manage a fishery.

20 MR. ROSENTHAL: But if you can isolate the 21 problems or the effects of the project, the project effects, you 22 know, the project caused loss and mitigate for just that project 23 cause lost.

24 MR. THRALL: That we intend to do. We have
25 a -- We will have a post-project monitoring program and over a



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1 number of years we will be able to -- I think, Larry, correct 2 me if I'm wrong, but the intent is to separate -- see how -- it 3 will give us a grade, did we really mitigate, did we not quite make it. And on that short term, assuming no tremendous disaster 5 to the fishery from external sources we will pretty much be able 6 to separate out the project, over a number of years of studies, 7 of project effects from non project effects and establish some 8 sort of a, you know we got an A+ we actually increased things 9 or we got a D- and we had a loss of whatever. And go back and 10 do remedial mitigation to make up from that. That would be the 11 thing would be structured. And there should be some licensed 12 terms to that effect I think that could be developed. But the 13 Power Authority would not want to have, I don't believe, license 14 terms that established a -- X number of fish period. Because 15 the very next year you could have some disaster, you know, to 16 the fishery and the Power Authority would suddenly be on the hook to replace those. 17 18 MR. ROSENTHAL: But you can phrase language 19 to ---20 MR. THRALL: -- Right. --21 MR. ROSENTHAL: -- exclude yourself from 22 having to face that situation. 23 MR. THRALL: But when we talk about numbers

24 we're talking about numbers that would be established over a num-25 ber of years of post-project monitoring. We're not talking about



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lestablishing --

2 MR. ROSENTHAL: -- Or based on historical 3 data. I mean, that's what you're going to base your monitoring 4 on, historical data.

5 MR. THRALL: It's a deviation. Sure. But 6 we have to look at a deviation from historical with the post-7 project. I mean, that's what you really do to see how you're 8 doing.

9 MR. ROSENTHAL: I see, you know, pre-dam
10 historical data, post-dam monitoring of how that dam effected
11 that, you know, that -- deviated from that historical data and
12 that's what you ought to mitigate for. That's the impact I would
13 isolate to the dam -- to the dam itself. You know, once you -- you
14 subtract out overharvest and other --

MR. ARMINSKI: -- It's just not that easy, MR. ARMINSKI: -- It's just not that easy, Ben. One of the things is that we've had record returns in the last three years as well. Tom, you know, mentioned all the factors that are related to this and I don't even know that it's possible to break them out.

MR. MEARS: There's another one I didn't mention though and there's some of us that believe that the quality of the data that you have and -- the quality of the data that you have in determining what fish go to the Susitna River is -- is poor to begin with, only very recently been implemented secondly. I look at the data and the way the fishery developed



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1 in Cook Inlet and I think there's a reasonable possibility that 2 Susitna runs were overharvested back in the 40's or before and 3 that anything that any of us or anything that anybody that's living in Alaska currently recognizes as being the productivity of the 5 Susitna River is grossly underestimated. I mean, you know, you 6 could make the opposite argument, if you care to, with the same 7 data I'm sure. But that's the nature of the problem, there is 8 no numbers that you can gather to say that this would be the base 9 line.

10 MR. ROSENTHAL: I thought that would be the 11 basis of a monitoring system basically.

12 MR. THRALL: We will monitor it -- we will 13 score ourselves against not making it observably, demonstrably 14 worse than it is I think. And what Tom refers to, if it turns 15 out that it has been historically seriously overharvested and 16 for one reason or another management changes and the things re-17 bounds tremendously obviously we don't we credit for that re-18 bound.

19

MR. MEARS: But you'll take it anyway. 20 MR. THRALL: On the other hand, if something 21 happens and -- something happens to the ability to regulate or 22 somebody comes in and it's tremendously overfished we don't want 23 to have to pay the penalty for the overfishing. So the only thing 24 we can do is try to protect habitat now then monitor that process 25 after the project is in place and look at and try -- and it's



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1 not going to be -- it's not a simple process at all. It's ex-2 tremely complex. I think Larry could talk more about that 3 certainly than I could. But over a number of years of monitoring 4 and a number of probably sessions sitting around a table with 5 maybe your agency and people like Tom and again arguing this through 6 will come to some conclusions about how well we're doing and make 7 some adjustments. Now, the terms that are in the license should 8 be terms that establish that process and establish the responsi-9 bilities to follow through on that. So I think we're saying pretty 10 much exactly the same thing.

MR. ROSENTHAL: But we're still going to have to define some kind of a -- something that we can monitor from. I mean, something that we can --

MR. SMITH: -- We can avoid going to spawners and still get some way of assessing that by pre-smolt survival or doing work at the slough out migrants and get some idea of what the rearing success and the incubation success within the spawining --

MR. THRALL: -- Just on a very -- very simplistic thing, if we're monitoring our sloughs post-project and we got a very light return in a particular year but also all the other areas of the Susitna River got a very light return as well. Now, to us, I mean, to most reasonable people maybe that would indicate that there's something else that happened that particular year out in the ocean and therefore you wouldn't get too excited



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1 about the fact that slough 9-A which has been modified didn't
2 get very many fish back in because the whole system got very few
3 fish back in. And you have to look at that and maybe the next
4 year you got just the opposite. So over a number of years you'd
5 look at what the trend is. It's a complex process.

6 MR. ROSENTHAL: I don't know what kind of 7 runs there are on that river but, you know, I guess in light of 8 some of the things that Brad just said, you know, you can compare 9 outlying versus what's come in in prior, you know, the prior year 10 and you can develop some type of a, you know, a formula or what-11 ever to see, you know, what the success rate, and I don't know 12 in biological terms what it's called, but what the, you know, 13 success rate is and in that way gauge, you know, if the -- if 14 your habitat mitigation is successful, has been working.

MARCHEGIANI: Even that has problem because MARCHEGIANI: Even that has problem because we have an unbelievably cold winter and everything freezes out, the survival rate is poor that year. What do you do now? MR. ROSENTHAL: Well, that's going to be

19 -- this -- Those type of programs are going to be done, aren't
20 they?

MR. THRALL: Yeah.

21

22 MR. ROSENTHAL: They're going to be done. 23 There's problems with them and I don't think we're saying that 24 that's how we're going to establish monitoring goals but just 25 that that's some program that will give us some insight into how



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1 system works.

2	MR. THRALL: I think maybe what we're doing
3	is we're jumping way ahead and we're debating how our monitoring
4	program is going to be we need to talk about that but maybe
5	today is not to go any further with it today I think we're
6	talking about the same thing.
7	MR. ROSENTHAL: We are if what you say is
8	true that all of the water flow alternatives mitigate there
9	is successfully no net loss, if they reach your objective.
10	MR. THRALL: Well, they don't. We have pro-
11	posed obviously we have looked at water flow alternatives that
12	don't meet that objective and we have rejected those. I mean,
13	we looked at
14	MR. ROSENTHAL: The ones that are viable.
15	MR. THRALL: Yes, the ones that are we've
16	selected the one that we think is the best, it's the trade off
17	between power flow and fisheries and we've looked at some on
18	either side of it and we will elaborate on that when we, you know,
19	that information will be presented.
20	MR. ARMINSKI: Okay, let's go on. Anybody
21	want to take a break? Maybe we ought to get up and have a cup
22	of coffee.
23	MR. LOWENFELS: Are there any other comments
24	on this paper?
25	MR. MEARS: I have other comments on this
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1 particular paper.

2 MR. LOWENFELS: Sorry, Tom, 3 MR. ARMINSKI: That's okay. MR. MEARS: A real major issue, somewhere 5 in here, reading through it this morning on the plane on the way 6 up I find that there are 10 guides and then I find that there 7 are less than 10 guides. So -- I don't care which number it is 8 but if I was writing it I would use one figure or the other. 9 Secondly ---10 MR. OWENS: -- Just to clarify that. There 11 are more than 10 that use the area but if you draw in the faci-12 lities and stuff there are less than 10 that will be affected. 13 MR. MEARS: At one point there are two sen-14 tences in a row one says there are less than 10 guides and the 15 next one says, but these 10 guides will be affected one way or 16 the other. So, you know, like I say, do whatever you want with 17 it, it doesn't make any difference. But the thing that I did 18 get confused about in going through this issue was the issue of 19 whether the access road is open to the public after construction 20 or not and what affect that would have. What is here does not 21 give me a very clear picture, a very clear vision of what the 22 future looks like under those circumstances. And I guess tangled 23 up in that is my own prejudice that says that if there's a road 24 there and it's on State of Alaska land and if the Power Authority 25 is the one that has the gate key I just can't imagine that that



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1 road's not going to be open.

MR. ARMINSKI: It's our intent to have it open.

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MR. MEARS: Okay, well instead of saying it, if this is going to happen, why don't we just make the assumption that the road's going to be open and that there are going to be some effects associated with it. It would seem to me to make it more straight forward in the writing.

9 MR. LOWENFELS: It will be open post-con-10 struction.

**	MR.	ARMINSKI:	Right.
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MR. MEARS: Yeah.

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MR. ARMINSKI: Any other comments? Hank?
MR. HOSKINS: Dallas, did you start this?
MR. OWENS: I think so. I'm sorry I did.
MR. HOSKINS: On the mitigation measures

17 endorsed by the Power Authority you say that three plans for miti18 gation impacts are provided here. The only difficulty I have
19 in putting my signature on the thing is that the mitigation plans
20 are based on position papers that we have not received yet. So
21 I -- I would just withhold the signature on that basis having
22 a chance to review and making sure the other things are resolved
23 before we can say yes.

24 MR. OWENS: We considered going ahead and
25 doing that in this paper, going ahead and talking about all those



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other mitigation papers but felt it would be so cumbersome and 1 redundant. But you're right, our 7 and 8 for instance haven't 2 3 -- have not come out. Yes and then I think one fishery MR. HOSKINS: 5 and some of the wildlife papers I have not reviewed. MR. ARMINSKI: Anything else? Why don't 6 7 we take ten minutes. 8 (OFF THE RECORD) 9 (ON THE RECORD) The next paper is R-4 10 MR. ARMINSKI: Okay. 11 this is the significance of impacts to downstream -- or boating 12 downstream to the Devil Canyon Dam. It's our position that the project related impacts to downstream boating will be insigni-13 14 ficant and the project in fact will generally benefit downstream 15 boating. Rick, are you going to -- ? 16 MR. SUTTLE: Yes. 17 MR. ARMINSKI: Rick Suttle. 18 MR. SUTTLE: In addition to reviewing the 19 license application and some of the external literature sources 20 the three principal data sources used to develop this paper was 21 a 1984 boating survey by Fish & Game for -- and that was used 22 for estimating recent use and destinations on the river and then 23 results of the draft report by R&M Consultants, which evaluated 24 the effects of the project on navigation in the river reaches 25 and finally it was dealing with the project flow information for



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1	the recent alternative flow report, Case E-6. As the position
2	states, the findings overall of the project it's not expected
3	to have much of a noticeable impact on the boating. We don't
4	foresee any problems in the Devil Canyon to Talkeetna reach and
5	there may be some minor problems downstream of Talkeetna in the
6	specific areas in mid-May, early to mid-May in low flow years,
7	which I think it's roughly maybe two, three years out of 30. But
8	none of that Even none of that will affect the major destina-
9	tion sites that were identified in the ADF&G Fish and Game boating
10	survey. Questions?
11	MR. ARMINSKI: Bruce?
12	MR. BEDARD: Yes, on page ii I just wanted
13	to add one other plus to the navigation on four where you say,
14	decrease in flood flows and et cetera, I'd like to add as the
15	possibility, wouldn't that also create new moose (indecipherable)
16	if you have a controlled flow? You have a lot of islands in there
17	with willow and when you have floods that does shift and change
18	and sometimes that wipes out all that willow and then it will
19	grown back in another area and then the river changes again. But
20	if you have a controlled flow you would be having those areas
21	that would probably permanently habitat by wildlife. I just wanted
22	to bring that out. On page three on the top
23	MR. ROSENBERG: In the short term you're
24	talking about. I mean, I don't know if it's appropriate, you
25	know, that will improve it in the short run but I don't know that

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Reporting Services 943 West 8th, Suite 110 Anchorage, Alaska 99501 277-8691 1 we need to get into that now.

7

MR. BEDARD: I just wanted to bring that 3 out as a point though.

MR. THRALL: This is subject to some addi5 tional analyses downstream and there will be some more information
6 on the flood flows, the ice processes.

MR. ROSENBERG: Yeah.

8 MR. BEDARD: Where it refers to the Mayhay's, 9 I guess is how you say it, Mayhay's River Boat Service. You use 10 the statement in here that they presently go upstream to Devil 11 Canyon. I think that should be reworded, the go upstream up to 12 about Portage Creek. If anyone remembers (indecipherable) tried 13 to go up there and they didn't make it. It just kind of indi-14 cates that people are able to go up there in a boat to Devil Can-15 yon. I question that.

MR. SUTTLE: We can reword that, he takes them up to view the Devil Canyon area and rapids.

MR. BEDARD: I just think the wording,
Portage Creek is more applicable. Also it says on page five on
the top again, top paragraph it says, most boaters coming downstream from the upper portion of the Susitna, I'm wondering what
kind of boaters are you referring to? Kayaks and rafts? Because
there's nothing else that can go through there and then it's
doubtful that some of those can go through. There's been a few
that lucked out and made it, but very few. And also I would like



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1 to say that upstream navigation from Portage Creek to Devil Creek 2 is not possible, no way possible and also a stretch through the 3 Vee Canyon is not possible going upstream. On page six, middle river impacts, again indicate that the river been Devil Canyon 5 and Talkeetna is navigable, while terminology of the documentation 6 the navigable stops at Portage Creek and then south. Some of 7 you here can verify that based on that document I got from DNR. 8 Also on the bottom of page six, "Considering the relatively small 9 drafts of canoes, kayaks and rafts it is not expected that antici-10 pated project flows will affect the whitewater boating that occurs 11 in this reach." The only thing I wanted to bring out there it 12 could reduce the thrills. It's a much less class, whitewater 13 class and there are those that like the more challenging waters 14 and if it reduces that then the thrill would be reduced. It may 15 increase the use by the more amateur whitewater rafters. On page 16 8 I wasn't quite sure what you were referring to in the middle 17 of the paragraph, "access road (assuming landowner approval)". 18 Are you -- APA, are you looking at providing some kind of access? 19 Is that what you're -- ? I don't think we ever talked about that. 20 MR. SUTTLE: I believe that's discussing 21 access below the Devil Canyon tail race tunnel. 22 MR. BEDARD: Okav. 23 MR. SUTTLE: Which that would -- I believe 24 that would have been selected or in the process. 25 MR. BEDARD: I don't know if you've ever

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1 had any discussions with native landowners on this particular
2 thing.

3 MR. SUTTLE: No. MR. BEDARD: Okay. That's something I'll 5 bring up then. Other than that, that's it. 6 MS.BERGMANN: Wasn't that discussed at the 7 meeting when we discussed whitewater boating when the group from 8 the Knik Canoers and Kayakers were here? And they were discussing 9 during that form providing some access down to the river. 10 MR. BEDARD: As a mitigation on their behalf. 11 MS. BERGMANN: Right. 12 MR. BEDARD: But you never discussed with 13 the natives whether or not --14 MR. SUTTLE -- You would actually do that 15 or not. 16 MS. BERGMANN: Okay. 17 MR. ROSENBERG: I just had a question. Was 18 that R&M paper, has that been sent out yet? 19 MR. MACHEGIANIA: No, not to my knowledge. 20 MR. ROSENBERG: Okay. 21 MR. SUTTLE: I think there's a draft out 22 I'm not sure where that stands. 23 MR. MACHEGIANI: It's internal draft right 24 now and we'll get it out as soon as we can. We're trying to gen-25 erate as fast as we can.



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1 MR. ARMINSKI: Any other comments? Mike. 2 did Parks have any comments?

> MR. GRANATA: No.

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MR. ARMINSKI: Okay. Next is F-7, signifi-5 cance of physical effects of transmission line corridors on fish 6 habitat. It's our position that the mitigation measures pre-7 sented in this paper will ensure that the impacts on fish habitat 8 from transmission line corridor will not be significant. Phil? 9

MR. SORDELIS: This paper was prepared using

10 the license application, information in the license application 11 and Fish & Game report on fish species present in streams crossed 12 by Watana and Gold Creek transmission corridor, plus information 13 contained in the EIS, I believe it was in EIS, for the intertie. 14 This information is basically feasibility level information. 15 There are no specifics in that information. We do not have an 16 exact location for the transmission line towers at this time. 17 It's fairly similar to what we had at the last meeting about camp 18 location and access corridors. Principal mitigation measures 19 mentioned in this are preventative in nature. Things like how 20 we will go about constructing the towers to avoid impacts to the 21 fish resource.

MR. ARMINSKI: Comments?

23 MR. GRANATA: From our engineering, geology 24 section I'll just read the comments. In the case of using driven 25 piles for foundation support to transmission towers it is



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1 important to note that significant energy waves are transmitted 2 to the adjacent ground during driving. If this occurs in the 3 proximity to flowing streams the result can be short term increases 4 in suspended silt from the channel walls and floor. In addition, 5 compaction and/or minor slumping in the channelway can result 6 causing impacts on fish roe and and feeding habitat. Our en-7 gineering and geology section felt that that wasn't significantly 8 addressed in the issues and if you could expand on that a ittle 9 bit. 10 MR. MARCHEGIANI: Did they provide any infor-11 mation as to what kind of distance between the streat and where 12 you might be driving piles where that might be a problem? 13 MR. GRANATA: No, they didn't but I would 14 imagine that that's the type of detail they'd like to see is how 15 far away. 16 MR. ARMINSKI: Does Fish & Game have any? 17 MR. ROSENBERG: I don't know about that one. 18 MR. LOWENFELS: Is there a name of somebody 19 over there that Phil can be in contact with? 20 MR. GRANATA: Randy Updike is chief of that 21 section. 22 MR. ROSENBERG: I can check to see what I can 23 find out about that but I'm not aware of . . .

24 MR. ARMINSKI: I know there's been a concern 25 expressed on other projects and I think there's always been --



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¹ never been any guidelines really developed because noone has ever
² really been able to assess what the impact would be. Hank?

3 MR. HOSKINS: Phil, with mitigation measure 4 number six, use of winter construction to avoid surface disturbance 5 and subsequent erosion. I'd like for you to expand that a little 6 bit please and include a definition of frozen conditions. Now. 7 we have used one on pipeline construction that called for a mini-8 mum depth of frost in the ground or snow cover, something along 9 these lines and I think in the literature various stipulations 10 have been put together that something like that is available.

MR. ARMINSKI: Would we be able to use the l2 existing DNR-BLM guidelines?

MR. HOSKINS: I think that would be very 14 appropriate.

MR. SCORDELIS: Would I want to mention that in this paper or would I just want to mention that stipulations in permits will designate how much snow has to be on the ground and to what depth the ground has to be frozen before construction can proceed.

20 MR. HOSKINS: I have no difficulty with you 21 putting the actual numbers in here.

22 MR. ARMINSKI: I guess I would have a 23 difficulty in that those may not be the actual numbers that are 24 -- end --

MR. HOSKINS: -- They are subject to change.-



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MR. ARMINSKI: -- up in the permits. But we could give examples of numbers that have been used in the past. For example, a foot of snow and 12 inches of frost or whatever. MR. HOSKINS: Phil, it wasn't clear to me seither how access would be gained to the transmission line rightfof-way from the Parks Highway. Will there be access roads con-

7structed or will it be using just existing roads and then traveling 8the right-of-way?

MR. SCORDELIS: As I understand it, what's lo planned is -- I'm not sure what I call them here but I believe I I call them trails that will come off the Parks Highway that would allow crews and equipment to get into a corridor to the right-ofway and construction would proceed along the corridor, the rightof-way, until a ridge or some -- say some physical feature prevented the crew from going any further, what I'm thinking of specifically would be a major river, if Montana Creek was in the way, and so then they would construct another trail, either another trail out or they would back track to the trail they came in on and then go down the Parks Highway, cross Montana Creek and then construct another trail in to reach the right-of-way that way rather than bridging over the major river.

MR. HOSKINS: Okay. Along the lines of these MR. HOSKINS: Okay. Along the lines of these access trails, a couple more questions. Your statement is that access trails will be constructed to the "minimum standards suitable for four-wheel drive vehicles." Do you have a body of



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1 standards that you're referencing here?

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2 MR. SCORDELIS: That expression sentence 3 came right out of the license application. I was just reiterating 4Lt. I have no idea what the minimum standards would be for a 5 four-wheel drive trail. I assume there would be some developed 6 pr perhaps if Fish & Wildlife has some that the Power Authority 7 would wish to adopt.

MR. HOSKINS: I don't know of any. 9 MR. ARMINSKI: I think what we would do is 10 probably, barring any restrictions, to try to utilize the same 11 access that was used to construct the intertie. It's already 12 been constructed. I think part of it will depend upon how the 13 job is bid. But it's always been our intent to minimize the num-14 ber of new trails that would have to be established. So if there's 15 existing roads to the right-of-way, Borough or private roads, 16 whatever or trails that have been constructed through the intertie 17 think those would be the first choice to use those. The two 18 -- two areas that would have new construction possibly are the 19 stubs because there aren't any existing transmission lines there 20 at present. But I think that's one of the things that's really 21 going to have to be addressed in the design phase.

22 MR. HOSKINS: Are these trails and the right-23 pf-way itself, this four-wheel drive trail, after construction 24 are they going to be open for public utilization?

MR. BEDARD: They're already there. Are



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1 you talking about Gold Creek to Devil Canyon trails?

MR. HOSKINS: I'm talking about new trails that will be built say from the Parks Highway to the right-ofway.

5 MR. BEDARD: Okay, from the Parks Highway 6 but of Curry we've got one that goes all the way into Portage 7 Creek trail --

8 MR. HOSKINS: -- No, I'm talking just to
9 the transmission line that parallels that Parks Highway. They're
10 going to have to be spur roads, access roads put into it.

MR. ARMINSKI: If they're roads constructed
on private land, whatever, just for the access I, you know, it
would be -- they wouldn't be open I would expect. They would
just be construction roads and they certainly wouldn't be maintained.
Furthermore, we don't have any intention of maintaining any roads
along the transmission right-of-way. So there may be public
access along the rights-of-way of certain trails if there on
bublic lands it's a DNR thing, but I don't think that the Power
Authority is going to maintain roads for public, vehicular access.
Pedestrian access I don't think that we have any problem with.

MR. HOSKINS: One concern, Tom, is the use MR. HOSKINS: One concern, Tom, is the use these trails by four-wheel drive vehicles and then taken it upon themselves to cross these streams and thinking about block boints being established on these stream banks to keep vehicles but.



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MR. ARMINSKI: We could certain try that.
You know whenever you establish a trail it's almost impossible
to block it.

MR. LOWENFELS: My understanding is that since this was not -- since this would not be maintained with State funds that it doesn't come under the definition of public highway that the State of Alaska has so there's no requirement, as opposed to other roads in the state which would have to be public and open.

MR. MARCHEGIANI: The other thing I think main you're going to find is that the contractor probably isn't going to be going in there with a four-wheel drive vehicle because he's going to be getting stuck all the time. He's probably going to he using a track vehicle to get in and out. And what it will boil down to is somebody is going to take a four-wheel drive and go in there and try to go along the track vehicle track and you're going to end up with a lot of people getting stuck and I think it will discourage people from actually doing it as much as like on a regular road.

20 MR. HOSKINS: Eric, you just mentioned a 21 contractor getting stuck. I was under the impression this was 22 going to be done under frozen conditions.

23 MR. MARCHEGIANI: Okay, well with frozen
24 conditions you won't have any problem. I mean, you won't be
25 getting stuck. But I guess my basic premise is that if you end



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lup with any kind of track in there with a track vehicle, some-2 body goes in later on I think they're going to have a lot more 3 problems.

> MR. HOSKINS: I would agree.

5 MR. THRALL: There certainly are, you know, 6 things you can do. Burms have been put across the entry point 7 for this sort of thing to control or even fences. To somebody 8 that's real determined they'll get in one way or another. Ι 9 don't think there's any full proof way of controlling that.

10 MR. HOSKINS: I was just after more or less 11 the position of the Power Authority on how they looked at these 12 access roads and the degree of maintenance and that sort of stuff.

13

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MR. THRALL: I think the only uncertainty, 14 and something maybe we need to check, is what the need might be 15 from a long term maintenance -- whether we have to go in and do 16 pccasional maintenance of those trails to provide access for what-17 ever emergency repairs and things. I don't think we know that 18 and I think we need to check it to respond to what your real con-19 bern is.

20 MR. HOSKINS: That follows my last question 21 pn here, are there sources of fill material that are going to 22 be required for the construction of the access roads or do you 23 just get a right-of-way from Charlie: Clover (ph) and put the 24 plade down and run it through?

> MR. THRALL: I think not even that much.



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1 Hank.

2	MR. MARCHEGIANI: I don't think there's going					
3	to be a lot of cut and fill or anything like that. The whole					
4	object is just to get in, do the work you need to put the foundation					
5	in and that's it and then whatever operation maintenance. I					
6	think our position, correct me if I'm wrong, Tom, but the less					
7	that there is for people actually getting in there there's less					
8	8 chance of them doing something to the towers or causing us problems,					
9	9 vandalism et cetera.					
10	MR. ROSENBERG: What's happening on the inter-					
11	ltie, have a lot of people been getting into that? Is that going					
12	to be a similar situation?					
13	MR. ARMINSKI: I'm not aware of any problems.					
14	MR. ROSENTHAL: How can you restrict access?					
15	15 What would be a feasible way of restricting access for other than					
16	6 transmission line purposes?					
17	MR. ARMINSKI: Burms, putting big rocks,					
18	boulders on the trails.					
19	MR. LOWENFELS: Trees.					
20	MR. ARMINSKI: Yes, planting trees, bg					
21	MR. SMITH: They're going to get in there.					
22	MR. ROSENBERG: Three-wheelers will get in					
23	there no matter what you do.					
24	MR. ARMINSKI: There's really no way to keep					
25	⁵ determined people out, it's just a fact of life.					
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MR. LOWENFELS: But we can probably work
out some system whereby if they're caught they're fined, et cetera.
I mean, to the extent that that's effective.

MR. ROSENTHAL: But could there be some type 5 of reclamation of those roads after those roads have served their 6 purpose? If the decision is that they're not going to be operational 7 roads, is that feasible?.

8 MR. ARMINSKI: Yes, it's feasible but I don't 9 know that it's always been successful. You plant a bunch of small 10 trees because you can't plant large trees and your four-wheel 11 drive people just run them over. It's nearly impossible to keep 12 people out. It really is.

MR. MARCHEGIANI: A good example, Ben, is
I live over by Chugach Foothills and they ran a transmission line
out and around behind us, over by the military reservation they
took railroad, sections of railroad and drove them straight down
and make almost like a fence and that gets you into liability
problems because somebody comes along and smashes into it with
a snowmobile or something and you created a man made hazard or
something like that. But even that you can see they've taken
all terrain vehicles and run around them. It's virtually impossible.
If they want to get in they're going to get in. You can create
some natural barriers and cause problems but it's difficult.
MR. BEDARD: And you've got the problem that



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1 from Devil Creek going south to Gold Creek all but six miles of 2 it are private.

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3 MR. ROSENTHAL: But once they establish right-4 of-way it's not a problem because it's no longer private.

MR. BEDARD: It will be private on both sides.

MR. ROSENTHAL: But the actual right-of-way

7 and the access portion of it will be cutting right through private 8 area.

9 MR. BEDARD: What I'm getting at is it will 10 be almost a fruitless effort trying to control access when it's 11 going to be there anyway. I mean, it's already there right now. 12 Gold Creek miners use that whole area.

MR. ROSENTHAL: Well, I guess then if there are existing roadways then the preferable route of the transmission forridor ought to be along those roadways and if we're in agreement on that then --

MR. ARMINSKI: -- There's not. There's not.
I mean, what I'm saying about existing roadways, provision of
access to the right-of-way may be by existing roadways. There's
not an existing road that the transmission line would run on and
we're not suggesting that we put the transmission line along and
existing road. This is a big problem that we had with the intertie.
We suggested that this intertie be constructed next to the Parks
Highway. I mean, ready access, you know, you don't have to disture
any new areas. The Parks people came unglued, you know, they



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1 just don't want this thing within close proximity to the highway
2 because of the esthetics. So that's why you find the intertie
3 12 miles away from the Parks Highway.

MR. THRALL: I think though that where there are existing access roads those will be used. To the extent possble that will be done.

7 MR. ARMINSKI: Yes. And then the line between
8 Watana and Devil Canyon will be paralleled by the project access
9 road, between the two dams. So there will be easy access to that
10 for construction purposes.

MR. ROSENTHAL: Now, does -- is this contingent at all on the routes that are proposed for the road -- roadway routes of the project? You know, if there's a southerly route as opposed to a northerly route, which has a southerly route being preference of several intervenors, would that affect this corridor?

17	MR.	ARMINSKI:	Between	the	two	dams?	
18	MR.	ROSENTHAL:	Yes.				
19	MR.	ARMINSKI:	Well, th	ne tr	ransı	aission	line
20	_						

²⁰ between the two dams was originally located on the south side ²¹ of the river and it was our feeling that from a maintenance and ²² construction standpoint and also asthetics that it best be located ²³ on the north side of the river where it's presently located. ²⁴ I don't -- Quite frankly, I don't know if it would change. We ²⁵ think it's in the best location as the road.



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1 MR. SMITH: Is that based on the number of ² stream crossings or just maintenance? 3 MR. ARMINSKI: -- Well --MR. SMITH: -- I know we've been over this 5 but frankly I can't remember what the --6 MR. ARMINSKI: -- Yes, the original reason ⁷ for taking it back to the north side of the river was basically ⁸ access and constructability. 9 MR. SMITH: So the answer to Ben's question 10 is basically that it is at least somewhat contingent upon reso-11 lution of final access routing? 12 I'd say that's probably true. MR. ARMINSKI: 13 MR. SMITH: I had two general questions. 14 One was just -- I think we just discussed. Whether there's been 15 an attempt to route --16 MR. ARMINSKI: -- Let me just say, you know, 17 it's our position that we're not going to change the -- I mean, 18 we -- what we propose is what we endorse and we don't see that 19 that's going to change it. 20 MR. MARCHEGIANI: I'm kind of confused. 21 I don't see how the north route affects the transmission line 22 at all. I mean, we're talking about coming in from the north 23 side and let's say --24 MR. ARMINSKI: -- Well, they're talking about 25 if the access road was on the south side of the Watana -- or the



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1 south side of the Susitna River.

2 MR. MARCHEGIANI: Oh. 3 MR. ARMINSKI: So it's not between Denali 4 and north, they're talking about the third alternative where it 5 would be on the south side of the river. 6 MR. MARCHEGIANI: Would our roads still be 7 connecting between Devil Canyon and Watana on the north side? 8 MR. ARMINSKI: No. 9 MR. MARCHEGIANI: Would it be on the south 10 side? 11 MR. ARMINSKI: Right. 12 MR. ROSENTHAL: I guess then we understand 13 what your position is. What our problem is we're developing what 14 our position ought to be in light of what your position is on 15 that. I'm not saying that we're in agreement yet, Noah (ph) is 16 not in agreement yet with the southerly or northerly route. We'll 17 look into that. 18 MR. MARCHEGIANI: I guess the only option 19 that would preclude the transmission line going in on the north 20 side of the river I guess would be the southerly route. If you 21 look at all the other routes you'd still have a road along the 22 north side connecting at least the two dams and your transmission 23 line would be there. Is that correct?

MR. ARMINSKI: Right.

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MR. MARCHEGIANI: So I guess the only exception



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¹ to an access road having an affect would be the southerly route.
² All other routes there wouldn't make any difference because you'd
³ still have a road between Watana and Devil Canyon and you'd still
⁴ have that transmission line. So I was really confused when you
⁵ said that it would be affected by access. I don't really think
⁶ it would be affected by access. I think the southerly route is
⁷ probably one of the lower priority access routes by intervenors,
⁸ which the exception of probably the natives.

9 MR. SMITH: What kind of maintenance acti-10 vities normally are required for transmission lines? Is it just 11 like getting in every five years getting in and cutting tree limbs 12 or -- it's not herbicides or any --

MR. ARMINSKI: -- No, I think it's even less frequent than that. Scheduled maintenance is what, every 10 years.

MR. ROSENTHAL: Is herbicides -- ?
MR. ARMINSKI: We're not proposing using
18 any herbicides.

MR. ROSENTHAL: What about slash, is it going 20 to be burned or what do they normally do with that?

21 MR. ARMINSKI: I they would probably just

22 do what --

23 MR. SNITH: -- I don't know if there's
24 anything as far as fisheries impact for what they do with slash.
25 I mean for bunnies it's good to leave it.



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1 MR. ARMINSKI: Well, you know, where they've 2 cleared the Parks Highway, you know, right-of-way they used a 3 hydroaxe and occasionally they strew stuff and --MR. SMITH: A big cultivator. 5 MR. LOWENFELS: That's the way to look at 6 it I guess. 7 MR. HOSKINS: If it's not hydroaxed piled 8 coniferous slash should be burned within the first year after 9 it's cut. But other than, if it's run through a hydroaxe or some-10 thing like that I have no difficulty with. That point on leaving 11 deciduous slash I like very much birds and wildlife. It really 12 was a boon to deer population on Kodiak, for example. 13 MR. ARMINSKI: I think that's probably some-14 thing that the right-of-way permit would address, what to do with 15 disposed materials. 16 MR. THRALL: I think that from a cost point 17 of view it's not a problem to do pretty much of anything, particu-18 larly in a lot of the areas that we'll be going through you don't 19 have a tremendous amount of vegetative materials to deal with 20 anyhow. 21 MR. HOSKINS: Very likely the private land-22 owner would dictate what he wants done with the slash and the 23 trees and that sort of thing. Phil, I've got a question on per-24 tinent studies on page four. The references listed don't address 25 anything on construction on permafrost conditions. And I'll ask

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Reporting Services 943 West 6th, Suite 110 Anchorage, Alaska 99501 277-8591 1 you if you considered or do you anticipate any problems with all 2 the access trails and on the right-of-way of degradation of the 3 vegetative mat over permafrost being a problem? Is there any 4 drilling program or anything like this that identifies the occurrence 5 of permafrost lenses?

6 MR. SCORDELIS: Yes, during design they'll 7 go out and drill to determine what the foundations for the towers 8 will have to be.

9 MR. HOSKINS: Well, then along those lines, 10 putting in the access roads, this is going to have to be a con-11 sideration that will have to be addressed then is the existance 12 of permafrost.

MR. ARMINSKI: I think as a rule of thumb 14 we want to avoid permafrost degradation.

MR. SCORDELIS: Hank, I'm glad to hear that somebody read the pertinent studies section. I myself found a deletion in there that was made somewhere in one of the many revisions, the last one on the first paragraph, Burns found access road and logging to be compatible. I think everybody knows that. What was deleted was, compatible with fish productions. I thought I'd bring that up in case anybody noticed that.

MR. ROSENTHAL: Unfortunately, I have several comments in addition to make so if you'll bear with me. ii, the first paragraph -- or no, second -- oh, yeah, first paragraph, last sentence. "These activities will be coordinated with ADF&G



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ADNR, U.S. Army Corps of Engineers." I'm just wondering why Fish and Wildlife and NMFS were lefthout?

3 MR. ARMINSKI: These are the -- These are 4 the major permitting --

5 MR. ROSENTHAL: -- But I thought that we 6 understand that permitting is not part of mitigation.

7 MR. ARMINSKI: Right, but there are -- there
8 is the inner agency review for all permit stipulations.

9 MR. ROSENTHAL: Right, but I think that more 10 specifically under this -- under the scope of this discussion 11 we're limiting ourselves to basically FERC related matters and 12 I think that this ought to be -- I guess part of the overall 13 onitoring scheme in Fish & Wildlife -- to the extent that Fish 14 & Wildlife and NMFS are included in that, and they ought to be 15 included in that, mentioned. The same point down in number one. 16 I think that basically the requirement that all State and Federal 17 permits be -- they be in compliance and required, that's not a 18 mitigative measure. Number two, "Adherence to any applicable 19 ADF&G Habitat Protection Regs that are in effect." I talked to 20 Dan and there aren't any in effect right now. That's totally 21 devoid of anything. I hope at some point we'll get more specific 22 on the appropriate impact prevention techniques that will be re-23 quired in number three.

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MR. HOSKINS: What do you mean?

MR. LOWENFELS: Yes, that one -- We've issued



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1 the manuals on those, which you may not have. 2 MR. ROSENTHAL: Yeah, I don't have those. 3 MR. LOWENFELS: You want them? 4 MR. ROSENTHAL: Yeah. 5 National Marine Fisheries MR. ROBINSON: 6 Service has them. 7 MR. LOWENFELS: I know they have them, but 8 Ben doesn't have them. 9 MR. ROBINSON: Sure. 10 MR. ROSENBERG: Just while we're at it on 11 number two, "Adherence to any applicable ADF&G Habitat Pro-12 tection Regulations." Is that -- Is that -- I mean, I know we 13 talked about that before I just wasn't sure if this time the in-14 tention was will be in effect. I mean, maybe there will be some 15 by the time this comes around. 16 MR. ARMINSKI: I guess there's a problem 17 that not everybody recognizes that those are proposed regulations. 18 MR. ROSENBERG: I mean, if you want to put 19 will be. I don't care. 20 MR. SCORDELIS: What did we call them last 21 time, recommendations? 22 MR. ROSENBERG: Did I say -- I'm sorry? 23 MR. SCORDELIS: Last meeting, what did we 24 change regulations to? Recommendations? 25 MR. ROSENBERG: Oh, no I think we just decided

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1 that --2 MR. THRALL: -- Why don't we just say will 3 be and then footnote it saying that these things are proposed 4 regulations and when they're in force we will --5 MR. ROSENBERG: -- Yeah, just so everybody 6 is clear on what the . . . 7 MR. ARMINSKI: Well, the problem is that 8 they may never be enforced. 9 MR. THRALL: Well, we can say if they're 10 enforced then. 11 MR. GILBERTSON: Will they be applicable 12 then? 13 MR. ARMINSKI: They're still applicable and 14 they find their way into all the permit stipulations. It's just 15 that, you know, they've never been adopted. 16 MR. ROSENBERG: Yeah, I think that's what 17 we -- What we really decided upon last time is that they would 18 be included in the permit stipulation. 19 MR. LOWENFELS: One way or the other we'd 20 have to avide by them. 21 MR. ARMINSKI: Yes. 22 MR. ROSENTHAL: I then go on. Number 8, 23 "Alignment of transmission towers" I don't like that greatest 24 extent feasible language. I don't know what that means. There 25 needs to be something more -- more specific. Maybe best



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1 management practice or -- or that they not be allowed in stream-2 beds maybe.

3 MR. ARMINSKI: It may not be possible. It 4 may not be possible. I mean, where you've got like the Tanana 5 River floodplain you may have to put a tower within the floodplain 6 I think the distinction is MR. LOWENFELS: 7 between -- it should have said that they will not be placed in 8 streams and where possible will not be placed in floodplains. I think everybody's in agreement that they will not be placed 9 10 in streams. 11 MR. ROSENTHAL: Right. 12 MR. SCORDELIS: That's a grammar. 13 MR. LOWENFELS: No, they might be placed 14 in streams? 15 MR. SCORDELIS: I don't know. I'm not an 16 engineer. I don't know what an engineer would do. 17 MR. THRALL: I don't think there's any river 18 wide enough that would require us to put a -- a tower in the -19 -- physically in the main channel. So I think we are very safe 20 saying that. But there are rivers that have floodplains that 21 are wide enough so that we will have to get into the floodplains 22 probably. 23 MR. ARMINSKI: That's really a design question.

24 You know, you can make it the intent that they not be placed in
25 stream. I mean, you may even stipulate that they may not be placed



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1 in streams. But really until you get on the ground and start
2 designing the thing --

3 MR. ROSENTHAL: -- See now you're becomming 4 inconsistent with what you earlier said. You want specific pro-5 posals from us, you want us to start developing specific --6 MR. ARMINSKI: -- That's what I'm saying. 7 I said you could specify -- I said you could stipulate that they 8 don't go in streams but I'm saying when you get on the ground 9 you may find that they have to go in floodplains. 10 MR. ROSENTHAL: Okay, well I don't know had the 11 whether there's disagreement over that but I don't think there 12 would be. I don't know. 13 MR. MARCHEGIANI: There needs to be some 14 clarity what you mean by --15 MR. ROSENTHAL: -- Defining what a flood-16 plain is. 17 MR. MARCHEGIANI: What a stream is. Because 18 what you can turn around and do is you can -- you've got over 19 here across the inlet where Beluga is, Chugach has got their towers

20 and there's one of them that got wiped out by coming out of a 21 lake there.

MR. ARMINSKI: Three of them.
MR. MARCHEGIANI: Three of them, right.
And what do you do, is that in the stream or not? You know, it
may not be in the stream today, we may have, you know, this big



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1 gravel bar and we put the piling down and five years down the 2 road the river washed all that out and the river washed all that 3 out and it's sitting high and dry, still doing what it's supposed 4 to be but now it's in the stream.

5 MR. ROSENTHAL: Well, I guess at the time 6 of construction. And you want to incorporate, to some extent, 7 you know, the change. But I don't know how much you can do that.

MR. THRALL: There's generally no good

9 engineering reason for putting things down in low, wet ground 10 so the engineers will avoid it to the degree possible. They will. 11 if it means, you know, going five miles around an area versus 12 across it on a cost basis they would go across and spend more 13 on the foundations and everything in the towers and that crossing 14 the floodplain. So that -- They would never -- I don't think 15 they would ever put it physically in the main channel of any of 16 these streams. I mean, the Ghanges River and the Mississippi 17 River and places like that have towers that have to go, you know, 18 actually -- but that's horrendously expensive. We're talking 19 about some minor streams. You have a certain distance you can 20 go apart and so if you get a wide -- a certain width of floodplain 21 you're usually forced to put a tower or two down on the floodplain 22 But stipulations are -- Your major suggestion we will incorporate 23 and that is we refer to some method of stipulating something.

24 MR. ROSENTHAL: I can see it occurring through 25 the monitoring scheme and having some, you know, in coordination



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1 with -- I don't know how we're going to -- well, however we decided ² on what type of monitoring that ought to be.

3 MR. THRALL: Generally transmission lines ⁴ are sited -- final design, they're sited in the field by engineering ⁵ and environmental people. In other words, we right now have a 6 corridor and then there will be refinement down to a rather narrow ⁷ strip in the design and then it's usually actually in the actual 8 construction you'll find that people are out there moving trans-⁹ mission towers back and forth to account for actual on the ground 10 conditions. 11 MR. ROSENTHAL: As long as we -- Okay, so 12 long as that understanding is made here. I guess I'd like to, 13 as an aside, just ask/order another document. Drainage structure 14 and waterway guidelines in number four referred to. I don't know 15 what that is. 16 MR. MARCHEGIANI: Brad should have a copy. 17 MR. SMITH: I should have a copy. 18 MR. MARCHEGIANI: I sent over --19 MR. SCORDELIS: -- Has that one been finalized 20 yet? I know it was undergoing revisions?

21 MR. ARMINSKI: It's final. It's been sent 22 to Fish & Game. 23 MR. MARCHEGIANI: Do you need another copy?

MR. ROSENTHAL: I'll check and if I don't 25 have a copy then I'll --

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1 MR. MARCHEGIANI: I sent you a copy. I know ² it did. 3 MR. THRALL: Would it -- We seem to run into ⁴ this, would it be of interest for us to come up with a list of 5 all the documents that have ever been sent out and finalized and -6 MR. LOWENFELS: You're asking for trouble. 7 Jim. 8 MR. ROSENBERG: There was a list at one time 9 I think, wasn't there? 10 MR. MEARS: Could you give us a description 11 of this thing. 12 MR. THRALL: I don't want to get into re-13 mailing to every individual. The thing -- You know we send an 14 enormous amount of these documents out --15 MR. ROSENTHAL: -- Well, as it's referred 16 to in here I come -- I become aware of it. So --17 MR. THRALL: -- Maybe that's -- Maybe we 18 should just go on. If you see something that you don't have let 19 us know. Otherwise maybe we're going to get into another mass 20 mailing and that's best avoided. 21 MR. MARCHIEGIANI: I do know that I physically 22 signed a transmittal to Brad and sent that to him. So I know 23 he has it. Now, whether -- If you need another copy --24 MR. SMITH: -- I have a sinking feeling that 25 I may have --



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1 MR. LOWENFELS: You know when Brad goes away 2 on vacation people come up to his desk and they take all sorts ³ of stuff off it. He has no idea where it all goes. MR. ROSENTHAL: I'll just go on to number 59. I'd like to see more specific on disposal of -- and I'm sure 6 EPA would on disposal of concrete waste water rather than just, 7 you know, referring to proper disposal. I -- that that will be ⁸ mentioned more specifically in mitigation plan. 9 MR. GRANATA: Ben, can I interrupt? 10 MR. ROSENTHAL: Sure. 11 MR. GRANATA: On number 9 I have a comment. 12 MR. ROSENTHAL: Sure. 13 MR. GRANATA: We agree also that there should 14 be more discussion and in reference -- perhaps referencing of 15 best management practices manual. I have a written statement 16 from the engineering/geology section that I'd like to read. Where 17 poured reinforced concrete is used for foundation structures 18 significant concern is warranted in handling of cement waste 19 waters. Even small operations can release substantial lime rich 20 water into surrounding surface environments. Care should be taken 21 to control lime rich waters at the construction site, at the 22 equipment clean up sites and in disposal areas of expendable con-23 struction materials. And with those comments we concur with this 24 paper, but we would make that statement. 25 MR. SCORDELIS: I think that would -- Those

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1 types of stipulations would come into place when the contract 2 is let. The Power Authority would tell the contract what -- how 3 he has to handle his concrete when it's been poured. I can mention 4 it in here that the contractor would be held liable for any damage 5 done by improper handling of concrete. But since I don't know 6 specifics yet --

7 MR. GRANATA: -- I guess we're concerned 8 with the best management practices manuals not addressing this 9 to the detail we'd like to see and letting it slip by into the 10 contractor's hand.

11 MR. THRALL: There's -- There will be permits 12 required for the actual construction that will -- there will have 13 to be these very specific control plans for all of this stuff. MR. ARMINSKI: Let me suggest that, you know, 14 15 we're going to submit permit applications through the Coastal 16 Consistency Review thing in a few months here and that might be 17 a real good opportunity for everybody to get together and decide 18 what kind of stipulations they want to see. You know, obviously 19 If you've got a concern about concrete, you know, why don't you 20 iraft a stipulation and, you know, that stipulation can follow 21 through into the design specs, whatever, into the bidding document. 2250 each contractor will know that this is how he's going to handle 23 concrete and concrete waste water.

MR. ROSENTHAL: But it also be a stipulation 25 to the license as well.



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MR. LOWENFELS: Yes.

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2 MR. ARMINSKI: I guess I have a problem in 3 making these things into stipulations to the license because --4 MR. ROSENTHAL: -- Why? 5 MR. ARMINSKI: Well, because the license 6 makes you subject to all these things anyway. 7 MR. ROSENTHAL: Oh, yeah, for sure. I mean. 8 if you're going to put in a contract you're making a contractor ⁹ subject so by the same token you ought to be making yourself 10 accountable to doing that. 11 MR. THRALL: Well, to the degree -- Well, 12 I guess the problem is, and I have no problem with it philo-13 sophically, but the problem will be this, the license is going 14 to be granted, assuming -- before detail design is done. You 15 can't put a stipulation in the license that is specific enough 16 without detail design. You can put stipulations, general stipu-17 lations about handling waste but when you actually go out and 18 design the project and let your contract bids your contractor 19 comes up with specific ways of doing things then you do a specific 20 permit, pollution control, all of that stuff and the detail has 21 to be developed after your in design and construction for the 22 permitting. There's no way you can come up with detailed stipu-23 lations --24

MR. ROSENTHAL: -- That's not detailed. 25 That's just a general goal. That's just something that you're



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1 going to prevent yourself from allowing.

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MR. THRALL: Right.

3 MR. ARMINSKI: I guess what I'd like to see 4 is perhaps your discussion -- or you discuss with FERC just exactly 5 what they're willing to stipulate. Because I guess I'm concerned 6 if we put a stipulation in the -- first, if they're willing to 7 put a stipulation in the license how does a person get a variance 8 MR. ROSENTHAL: You can put anything in there 9 you want. This is an offer of settlement right now. I mean, 10 if you don't put it in now then you assume you'll wait -- we'll 11 wait for hearing and then put it in, ask them to put it in then 12 and you make that decision. But you can -- you can agree to almost 13 anything in a settlement. I don't know, Jeff may have --14 MR. LOWENFELS: -- I think what's happening 15 here is that everybody agrees, we need specific recommendations 16 -- not specifc -- we need specific stipulations as to how concrete 17 waste is going to be disposed. The question is just the timing 18 of it. What I'm hearing from you is you're not satisfied with 19 our simply saying we will use or ensure the proper disposal. 20 MR. ROSENTHAL: Well, no, no, no, no I said 21 earlier -- I said that I take it at some point that we will have 22 more specific, you know, guidelines, we'll have a plan and that 23 this isn't -- just to say that the appropriate, you know. 24 MR. THRALL: I guess maybe we're talking 25 again -- I'm talking about the level of detail. To me some of



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1 this stuff is extremely -- and for every -- for every construction 2 activity and for every physically different location where we're 3 using concrete for example we will have to have some specific 4 plans for addressing the concern that was brought up this morning. 5 And we can come up in the license with general intents to follow 6 certain practices but we can't specify exactly how it will be 7 handled at each area where concrete is being, you know, obviously 8 what you do for foundation of transmission line is totally different 9 from what you do at a batch plant where you're building -- mixing 10 these tremendous volumes of concrete for the project.

MR. ROSENTHAL: It's up to the monitor to 12 -- to see to it that the guidelines are implemented during con-13 struction.

MR. THRALL: We're saying that we're going to do better than that though. We're saying that when the contract documents are bid for specific construction activity where you now know -- the contractor has now said, look, here's how I'm going to accomplish this, because you don't know. The engineer designs something and there's 10 different ways to build it. The contractor comes in and he places his bid based on certain assumptions about the type of equipment he wants to use and where he wants to put things and how he wants to put it together, that's when you come in and specifically put the restrictions on him. You have to give him rules to play with then. So you go through -- in the license you can certainly have stipulations about these



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¹things, I don't disagree. I guess the only thing I'm concerned 2 about is we seem to be talking as if we're going to put something ³ in the license that will be specific enough to cover everything 4 and I think that --5 MR. ROSENTHAL: -- It will be general. Ι 6 mean, it can't cover everything. 7 MR. THRALL: Well, that's my --8 MR. ROSENTHAL: -- Stream A will have this 9 impact and we will -- I mean, we will mitigate that. I mean, 10 we're not asking that. 11 MR. THRALL: I think maybe that's where I'm 12 getting excited here is I was hearing earlier an indication again 13 which seems to come up is that you can right now come up with 14 specific plans for a lot of this stuff. And I think that, Hank, 15 would you agree based on Terror Lake that this is not possible 16 at a pre-design level to come up with this level of specificity? 17 MR. HOSKINS: I agree. 18 MR. THRALL: So that's all my concern is. 19 So again, I ---20 MR. ROSENTHAL: -- Well, if that's the case 21 then I, you know, further muddle the issue. I guess it would 22 be incumbent upon intervenors to require that specific contracts 23 be reviewed for additional comment by resource agencies at that 24 time when it does become specific. and have -- and be gained input. 25 MR. HOSKINS: Ben, I'm very much in favor



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1 of the way the Power Authority is tracking this with the best ² management practices manual. Now, I discussed with somebody from ³ the Power Authority on this best management practices manual of 4 rather than having a single, final document actually have that 5 thing prepared in a loose leaf binder so even though it has final 6 on the cover it can still be revised as we go along. It's my 7 way of thinking, special concerns to stipulation about waste con-⁸ crete and concrete water could be put into this best management 9 practices manual. Then when you look in terms of FERC license 10 the best management practices manuals are incorporated by reference. 11 That takes care of it. 12 MR. ROSENTHAL: Okay. 13 MR. LOWENFELS: Well, that takes care of

14 it and then there is even one more level and that is when the 15 contractor goes out to get his permits, which goes through this 16 interagency review process, the exact language for that exact 17 job will be in that permit. So you get --

18 MR. ROSENTHAL: I don't like to wait.
19 MR. LOWENFELS: I understand that. I under20 stand that. But --

21 MR. ARMINSKI: -- The stages are going to 22 happen almost at the same time because we're going to start 23 developing the permit stipulations here shortly. I mean, those 24 -- all those things are rolled together in, you know, this final 25 mitigation plan and license stipulations and permit stipulations.



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¹ We expect Fish & Game and DNR and the Corps and EPA to tell us ² what, in consultation with you, what treatment there will be for ³ waste waters, concrete discharges, whatever. And, you know, those ⁴ kind of specific things are going to find their way into the de-⁵ sign, they're going to supplement the BMP manuals and the con-⁶ tractor is going to be bound to do that or something that has ⁷ an equivalent affect.

8 MR. SMITH: What was the experience with 9 the intertie? What happened there? I mean, did DNR and Fish 10 & Game -- I mean, I know we didn't have any input.

MR. ARMINSKI: No, they didn't, not to my 12 knowledge. There were no -- nothing that specific.

MR. SMITH: So it doesn't seem reasonable
14 to assume that it's going to occur with Susitna. There's nothing
15 magic about --

16 MR. ARMINSKI: -- Why not?

MR. SMITH: Well, outside -- unless you're kalking about the license and the leverage that we have because of the FERC license it's not going to happen if it didn't happen with the intertie.

MR. ARMINSKI: Well, it didn't happen because no one was concerned about it, that's why it didn't happen. MR. HOSKINS: The Power Authority did not even acknowledge such things as best management practices manual and along those lines.



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MR. LOWENFELS: Which are now going to be ² used for all power projects, not just for this one. 3 MR. ROSENTHAL: And Corps permits wouldn't 4 be required for a lot of this. MR. HOSKINS: We can sit here and stipulate 6 to the Nth degree and I guarantee you the first day out there 7 in the field you're going to find a situation that we didn't con-8 sider and we're going to have to modify. 9 MR. ARMINSKI: Right. 10 MR. ROSENTHAL: That doesn't defeat the pur-11 pose as best you can and to try and predict --12 MR. HOSKINS: -- If defeats it if you've 13 got things to do and you spend all your time working on stipu-14 lations. 15 MR. ROSENTHAL: That's a lawyer's job. Ι 16 mean, that's all he does is work on developing that kind of -- on 17 those types of stipulations. 18 MR. HOSKINS: I hope not biological stipula-19 tions. 20 MR. ROSENTHAL: Well, hopefully in consul-21 tation with the expertise of the agencies. I wouldn't hazard 22 jumping into it without knowing any, you know --23 MR. THRALL: -- I think the degree to which 24 you can stipulate things in the license is no problem. The only 25 problem is if we get into stipulations in the license that assume



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¹ that things are going to be done in a certain way and only that
² way and it turns out that it can't be done that way or won't be
³ done that way. Then you're locked into one of these sort of legal
⁴ absurdities.

MR. ROSENTHAL: I guess until we come up
with something we can't say what it -- what -- how inflexible
it would be. But I imagine that there could be flexibility worked
into something like that. Okay, there's just two other points
I have on this. Number one, I assume that there will be sufficient
buffering -- buffered areas between these transmission sites and
the stream -- and the streams so that the effects to the stream
will be minimized, you know, buffer zones or -MR. ARMINSKI: -- Well, if you have to cross
the stream you can't establish a buffer.
MR. ROSENTHAL: Okay, yeah, granted that.

MR. SCORDELIS: You're talking about not 17 constructing a line parallel with the stream --

18	MAL ROSENTIAL RIGHT				
19					
20	MR. ROSENTHAL: Well, I don't know. That				
21	remains to be determined how how wide of a buffering zone there				
22	ought to be, but there ought to be a buffered zone.				
23	MR. THRALL: One of the criteria in originally				
24	locating corridors for transmission line was to avoid any para-				

25 lelling of streams to the extent possible.



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MR. ROSENBERG: And that's in the BMP's too,

MR. THRALL: So that was taken into con-

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²I think.

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MR. ROSENTHAL: All right.

5 sideration earlier when we first started looking at the corridors.

6 MR. ROSENTHAL: One last thing. Page 5 there
7 is some discussion over construction activity in or near streams.
8 There's nothing there that prevents that from occurring and I'd
9 like to see some language that would prevent construction in streams
10 or use of stream to allow -- to work from to create access. You
11 know, I'd like to see minimized impact on the stream and especially
12 during the incubation period. I don't know page 5 doesn't really
13 get -- it just says that there may be an impact. It says -- it
14 defers to State Blasting Guidelines and I'd like to see something

MR. HOSKINS: Well, a Title XVI permit would MR. HOSKINS: Well, a Title XVI permit would be required for those stream works and then it's appropriate at that time to have the stipulations and so forth to govern work with the Title XVI permit.

20 MR. SCORDELIS: One thing I can mention, 21 it's something that we discussed at the last meeting, and that 22 was a window of sensitivity for the fish species present in the 23 area and draw up a table showing when eggs are incubating in the 24 gravels, that kind of thing. Permits will try and work around 25 those windows of sensitivity.



Reporting Services 943 West 6th, Suite 110 Anchorage, Alaska 99501 277-8591 ¹ MR. ARMINSKI: I think Fish & Game has fairly ² well established policies regarding the use of equipment in streams ³ or near streams.

MR. SCORDELIS: They wouldn't be used as 5 highways. A piece might have to be moved from one side to the 6 other on a small two foot wide channel that may have grayling 7 in it, for example, that kind of thing would be allowed, quick ⁸ crossing. It may even be winter crossing, don't know, that's 9 a specific. But short, quick, crossing by a piece of equipment 10 was allowed in Southeast when I worked down there, as long as 11 the piece did not travel up and down the length of the stream. 12 It's just a relatively minor churning of the body. You can still 13 see through the cloud of sediment that's kicked up. I mean. it's 14 not mass destruction. It's just an infinitesimally small pulse 15 of sediments. We're not talking major problems. 16 MR. ROSENTHAL: That's it.

MR. ARMINSKI: Other comments? MR. GRANATA: In reference to the BMP's, are they going to take the form of a loose leaf binder and you'll incorporate stipulations from the agencies to be developed as the project permitting comes close? Is that the new scenario on those?

23 MR. LOWENFELS: No, I don't think so.
24 MR. GRANATA: Oh, that's just a question
25 that was raised.

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MR. ARMINSKI: I think the idea was to put those into loose leaf form so we could add new practices as they were suggested or whatever. But I don't think we would add permit tipulations per se to those. Those permit stipulations are permit stipulations --

MR. GRANATA: Okay, so you wouldn't reference
7 the license to the BMP. That's what I thought I heard before.
8 Hank said it would reference a certain part of the BMP, a stipu9 lation.

10 MR. HOSKINS: Right, the BMP's could be 11 referenced in a FERC license.

12MR. GRANATA: But not to the permits?13MR. HOSKINS: Right.

MR. ARMINSKI: Oh, there will be reference IS to permits as a license stipulation. Say that the license has I6 to abide by all State, local and other Federal permits.

17 MR. HOSKINS: And then it's my point thinking 18 that if an agency has a problem like this concrete water and so 19 forth, develop that, rather than the form of a stipulation develop 20 it as a best management practice and then talk it over with the 21 agencies and we go to the Power Authority and we say that we have 22 a problem with this particular thing and we think it should be 23 included in the best management practices manual. It is then 24 not a stipulation on a license or anything like this, it's included 25 as a practice. What I was looking for from the Power Authority



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1 is to provide a vehicle whereby we could make recommendations
2 or additions or changes to the existing best management practices
3 manual.

MR. GRANATA: Our recommendations were along 5 those same lines also.

6 MR. ROBINSON: One point might bear some 7 thought here and that is that the best management practices manuals 8 were written for all Power Authority projects throughout the State 9 of Alaska and as such are, I think the word we used was, generic. 10 They aren't project specific and they weren't written specifically 11 for and only for the Susitna project, but again, for other projects 12 throughout the State. And the other thing I think we might think 13 about is the best management practices manuals were written for 14 the people who are going to design the project during the final 15 design, for the design engineers who will be working, as Jim was 16 saying earlier, on the plans and specifications for the project 17 during the final design of the project. Those plans and specs 18 will be extremely detailed and those are the things that the con-19 tractor will bid on and come up with a plan of operations, a very 20 specific plan of operations on how he, the contractor, the con-21 struction contractor, will go about making, building, doing the 22 things that are specified in the plans and specs. That's where 23 the BMP's fit in. I would agree with some of the suggestions 24 that have been made here about there's a concern, for example, 25 about the construction waste -- concrete waste. That sort of



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1 thing could be added to a BMP and various -- as one of the topics
2 covered and then various ways of dealing with that hazard dis3 cussed under the -- these more generic guidelines that are in
4 the BMP's. But I sense that.

5 MR. THRALL: Let me just -- I want to make 6 sure. I think this is a very important point and let me go into 7 my lecture number 32 which I've used with people on the Harza-8 Ebasco staff. Let me preface it by saying the best management 9 practices manuals are as Jack says, sort of an overall thing. 10 When we go through the design the engineers will then come up 11 with their bid documents. And those bid documents it is our 12 intent that when they go out they'll have attached to them part 13 of the stipulations on which the contractor is bidding, a big 14 package of things that says, here are the environmental stipu-15 lations that you must adhere to so that the contractor bidding 16 looks at those stipulations and those will be at a level of speci-17 ficity somewhere above, quite a ways above, the best management 18 practices. So the contractor knows when he is bidding what it's 19 going to cost him in maintaining this environmental acceptability 20 in his practice. The reason that this has to be done is that 21 the last thing in the world that anybody who is involved in this 22 project wants is to have somebody come out and try to stop the 23 contractor from doing something and get into a claims situation 24 where the contractor says, I didn't know about that, this is more 25 money. Or have the -- an agency person say, wait a minute, not



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1 only is it wrong you can't even do it, you have to stop things, 2 which now brings me to lecture number whatever I said it was. 3 That is, one thing that everybody has to keep in mind is this project, Watana Dam, is about 66 million cubic yards of fill. 5 If you assume one belly loader carriers three cubic yards, which 6 is about right, and if you assumed that you could work 24 hours 7 a day, 12 months a year, which you can't, just for simplicity, 8 that would be one truck dumping every 40 seconds, 365 days a year, 9 24 hours a day. In other words, -- Now, it's not going to be 10 done that way, it's going to be done over a period of years for 11 about six months of season that's available. The point is, once 12 this project gets going and once the construction starts that 13 -- the activity, the level of activity that the contractor is 14 going to have to maintain to get things built and get the project 15 done and the power on line and save all this money or horrendous 16 overcosts is going to require that he be able to go out there, 17 start his work and do it at an utmost efficiency. It's a lot 18 of stuff being moved around and then all the concrete work, all 19 the penstocks, all the turbins everything has to be fit in. So 20 you're placing in all this fill as a major activity and you're 21 fitting in a lot of other activities. It's very, very important 22 for the project to be set up in such a way that you don't get 23 into these things where a contractor says, gee, I didn't know 24 that, that's a big problem, that's going to cost you an extra, 25 you know, 50 million bucks for me to adhere to that. Or to have



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¹ an agency say, you can't do that in that way, we're going to have ² to shut you down. So the whole planning has been let's get these ³ things specified when they go out for bid, the contractor sees ⁴ it so there's no question in anybody's mind, he bids with those ⁵ things in mind, he takes account of what he has to do in his cost ⁶ and then you proceed. Obviously it's not going to work that way ⁷ perfectly, but to the degree that we can make it work that way ⁸ is to our advantage. And when I say our I'm saying the people ⁹ who would be building the project.

10 MR. ROSENTHAL: And it's to NOAH's (ph) a 11 advantage that they be assured that the -- and although, you know, 12 I think, you know, in good faith you're striving towards that 13 but we want to assure that -- that that is achieved. In order 14 to assure ourselves the only way we have -- there's two ways. 15 Either include it in a stipulation -- request to include it as 16 a stipulation or we have some input into the actual contracting 17 of the operation. I would prefer that we have both, that we both 18 have input into the contracting scheme and, you know, advisory 19 and with -- with the other resource agencies and we have an over-20 all general stipulation that -- that if you're going to talk about 21 concrete that certain practices be taken. I think you can 22 eneralize to some extent. You don't have to be -- You don't 23 have to be too tedious in detail.

24 MR. THRALL: Well, I think the stipulation
25 and the license -- general stipulations is no problem again, with



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1 the caveat that you just can't get real detailed. And I think ² that it's not useful to try to get real detailed. In terms of. 3 you know, how the agencies will participate in contracting I think the Power Authority might have real problems with that. They 5 don't have any -- probably won't have any problems though in the 6 agencies setting the limits within the contract has to be. I 7 don't think the Power Authority wants you to review, you know, 8 and put together a bid document. They do want your input so they know what the guidelines are. So they're -- again, I'm -- I'm 91 10 - I'm talking here about things that are eventually going to 11 be Power Authority policy that I can't make any policy.

MR. ARMINSKI: Can we go on? The next paper.
Okay. Last F-9. This is significance of water quality and stream
morphology effects of borrow and spoil areas on fish habitat.
Our position is that the mitigation measures will avoid long term
impacts and minimize short term impacts of borrow and spoil areas
in a fish habitat. Phil?

18 MR. SCORDELIS: This was mine also. This 19 document -- or this paper was prepared using the information in 20 the license application plus some handbooks that are available. 21 It has a little more specificity than the previous paper in that 22 we have general areas where borrow material is going to be re-23 moved, those are shown in Figure one and Figure two. One thing 24 that should be noted is that in the original license application 25 these borrow areas were somewhat larger, their boundaries were



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1 somewhat larger than was actually anticipated for materials to ² allow for problems that could arise as far as material availability. ³ The reason I mention that is in the license application there was some information about in-stream mining being necessary and 5 that's one of the things that is in question at this time. At 6 this time our geo-technical people are saying that there will 7 not be a need to do in-stream mining in order to acquire all the 8 aggregate material necessary for construction of the dam, that's 9 one thing that is not mentioned in this paper. On the other hand, 10 there may be some in-stream mining necessary for road construction 11 and I don't think that was mentioned in the paper on the access 12 corridors. It may not be appropriate for that paper. It may 13 be more appropriately mentioned in this borrow activities paper. 14 Anyway, that's one thing that I'm planning on putting in this 15 paper in the next effort. Again, the mitigation measures are 16 principally preventative type measures. We do have a mitigation 17 plan in the mill that discusses corrective type activities from 18 impacts that occurred during construction. That -- That's being 19 prepared by Woodward Clyde (ph) I believe through Entrex (ph). 20 It's ongoing so if you have any ideas of things you'd like to 21 see incorporated into that mitigation plan you probably should 22 contact me. Let me know so I can relay that to those various 23 subcontractors.

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MR. ROSENTHAL: Is there a draft -- Is there

25 a draft available?



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1 MR. SCORDELIS: No, they haven't -- it hasn't ² even been -- I don't know where it is. I don't have a handle 3 on that. I'm not overseeing that at all. But they're reviewing .y issues -- my position papers so that everything is in agree-5 ment, what I say and what they write is in agreement. If I have 6 additional information to provide them from you then that would 7 be helpful. 8 MR. ROSENTHAL: If you can locate something 9 in writing I'd like to see it. That's all I have to say on that. 10 MR. ARMINSKI: Larry, what's the status on 11 that? 12 MR. GILBERTSON: It's in preparation. Ι 13 can't remember the exact date when a draft will be out, but it's 14 in May that a draft is scheduled. 15 MR. ARMINSKI: Are we going to have a --16 are we going to have a meeting on that? Settlement meeting? 17 Technical discussion meeting? 18 MR. GILBERTSON: On that report? 19 MR. ARMINSKI: Right. 20 MR. GILBERTSON: It would be easy to do. 21 MR. HOSKINS: Phil, I have one item I wish 22 you'd ask them to discuss. With reference to page three, the 23 first paragraph and page seven, mitigation measure number three. 24 Please discuss the reasoning for disposing unuseable spoil material 25 in upland areas. This activity would impact existing habitat,



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¹ require placement and stabilization and placement grading, restora
² tion by fertilization and seeding and maintenance of any erosion
³ control structures. If the spoil was disposed below the flood
⁴ pool level of the resevoir it could be covered with a layer of
⁵ shot rock not suitable as dam fill material and forgotten.

6 MR. SCORDELIS: I've talked to Charlie 7 Craddock (ph) about that and he -- he's been thinking about that 8 exact -- exactly about that. He's wondering if it's not possible 9 to just truck that stuff into the resevoir area and eliminate 10 it that way. I don't think that that has been -- that upland 11 spoils areas have been decided upon at this time. This is what 12 was mentioned in the license application and that's what I used. 13 MR. HOSKINS: Right, so we're just asking 14 you to consider this. We see enough upland habitat disturbed 15 already and we prefer to have the spoil before. Out of sight, 16 out of mind type thing.

MR. THRALL: Phil, weren't we also talking about taking spoil and using it to backfill areas where we removed materials? I think we were looking at those two things. If you've gone in and taken borrow materials out of a site and then you have other material, spoil material, you can backfill your borrow site and then cover it over or you can put it in the resevoir and cover it up. I think that's where we're headed.

MR. ROSENTHAL: The mitigation plan, is 25 that going to get a little bit more specific about where these



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1 disposal sites are going to be as well as -- are they just going ² to be as close to the borrow sites as possible? Just take the 3 overburden and replace it or how are they going to be sited? 4 MR. ARMINSKI: I think the facilities master 5 plan will help to site those. That's something that we should 6 beginning right now. 7 MR. ROSENTHAL: A facilities master plan? 8 MR. LOWENFELS: Where all the facilities 9 go. 10 MR. ROSENTHAL: Something more. 11 MR. SMITH: That's being developed or that 12 is --13 MR. ARMINSKI: -- Well, it's budgeted and 14 we've directed Harza-Ebasco to begin on that effort. 15 MR. ROSENTHAL: Also to be disseminated at 16 a future time? 17 MR. THRALL: Again, we have not designed 18 this project yet. I don't know any other way to state it. This 19 project has -- has been studied at a feasibility level and that's 20 all you do for a license, you study it at feasibility level. 21 You do not spend the money on design until you have a license 22 because design is very costly. So what we're doing this summer 23 is we have right now a plan for an airstrip and a camp and a 24 permanent village and everything that was put into the license 25 application at the feasibility level. We're going out now the



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1 and really doing a master plan to really site that stuff by actually 2 getting out in the field and looking at it. We've got a -- We've 3 got it placed on a map right now, here's a permanent village and 4 here's an airstrip and here's this and here's the other thing. 5 But we need to go out and site them really. Dig a little dirt, 6 look at the foundations a little, take some environmental people 7 and say, no, don't put it there and really do that -- plan for 8 the facilities. Which is, again, not final facilities, it's a 9 step in that direction. From that you would do the final design 10 of the facilities. 11 MR. ROSENTHAL: So -- Yeah, I quess it would 12 be appropriate them to disseminate that? 13 MR. THRALL: Yes, it definitely will be 14 disseminated. 15 MR. MARCHEGIANI: We don't plan on with-16 holding any information. 17 MR. LOWENFELS: Nothing secret around here. 18 MR. THRALL: Again, I don't mean to indi-19 cate -- it's just that we're -- there's no other way that we can 20 proceed. I mean, we simply are operating on feasibility level, 21 which is the way that the licensing process is set up. As you 22 go from feasibility studies to design to contract bids -- contract

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22 go from feasibility studies to design to contract bids -- contract 23 specs and bids the thing becomes more and more and more and then 24 you get into construction and the construction engineer looks 25 at the drawing and says, this is not the way it really is, when



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1 we excavated out this foundation we found that it wasn't quite ² that way so it gets changed again. And you have to have those 3 checks and balances built in through the whole system. MR. ROSENTHAL: I just have one fundamental 5 difference with that is that I think you can propose specific 6 measures in the license that affect design of the project --7 MR. THRALL: -- But it -- No, you can. --8 MR. ROSENTHAL: -- even though it's at the 9 feasible stage. 10 MR. THRALL: You can but I guess you can't ll do it on a --12 MR. ROSENTHAL: -- FERC has done that in 13 the past to other projects. 14 MR. THRALL: They have, but again, I think 15 it's just that I'm hearing something wrong. Those are general, 16 those conditions in FERC licenses are very general and maybe we're 17 thinking much too specific when we listen to what you say. Be-18 cause license conditions are very sort of general things and we're 19 thinking about more specific, more detailed materials. 20 MR. ROSENTHAL: And then in addition to that 21 to the extent that you can incorporate a settlement offer you 22 can be as specific as you like. There's no limit on how specific. 23 But I don't think we want to be tediously detailed in our requests. 24 Well, we won't be, we can't be. We don't have the expertise even 25 to request that.



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MR. MARCHEGIANI: It wouldn't be to your advantage because you're going to need the flexibility to adjust it as we go along.

MR. SMITH: Are there any concerns over the actual siting? Is one of the main issues here the siting of the borrow sites themselves? It's not necessarily a concern of our agency because of dealing with upland habitat or fresh water fisheries, but is there -- ?

9 MR. ARMINSKI: Well, one of the things that 10 they did in the license application is identify these borrow areas 11 and there's probably two to three times as much borrow area 12 identified as is actually needed so that they can assess the feasi-13 bility of building this project. So one of the things that's 14 going to be done during this master planning effort and the geo-15 technical investigations is to actually go out and drill some 16 of those sites and determine the actual extent of the sites and 17 rolled into that are economic considerations, environmental con-18 siderations.

MR. SMITH: How would -- Where would the environmental considerations come from then? There will be a separate team doing -- analyzing those sites at that stage --I mean, it's obvious that there's a pond there with fish but there are other changes that might be less apparent, drainages --

> MR. THRALL: -- What will happen --MR. HOSKINS: -- Brad, it should be included.



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1 for every borrow area there will be a material site plan on how
2 the borrow area will be open by steps, by aliquots, amounts taken
3 out, this type of thing and then also in this plan it would be
4 how the material site or borrow area would be restored.

5 MR. SMITH: Those would all be post-license 6 though, wouldn't they? That type of -- ?

7 MR. HOSKINS: Maybe post-license but all
8 the provisions that would apply to a material site plan would
9 be included in best management practices manual.

MR. SMITH: I guess all I was just wondering 11 is does anybody have any concerns about these general sites as 12 they're presented in this position paper?

MR. HOSKINS: Well, I guess other than the fact that they're going to be in streams and so forth, but we're limited as to where the gravel is. So the next best step is to le use the existing technology and expertise to make them environnentally compatible, if there is such a thing. So other than that I think they're on the right line the way the procedure is set up here.

20 MR. THRALL: I think the assumption is that 21 borrow site C will be the main one, isn't that correct? It's 22 been sort of an underlying assumption on everybody's --

MR. SMITH: Is that regardless of the access?
 MR. THRALL: Well, again, that assumption
 is based on the fact that we have gone out and looked at the thing



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1 from the surface and they're pretty sure that what they need will
2 be contained within that site. It seems to be the most logical
3 and convenient one to use and it's been looked at environmentally
4 during the license process and it came out -- I don't know if
5 it came out the best but it came out in a balance.

6 MR. SCORDELIS: That's borrow site -- I should 7 state, that's borrow site E.

MR. THRALL: E, okay.

9 MR. SCORDELIS: C is way upstream. That's 10 one of the two unlikely to be used.

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MR. THRALL: Okay, so anyhow the thing is we need to get out -- nobody has ever gotten out there and drilled down or dug down to see what the real extent is. Until that happens down or dug down to see what the real extent is. Until that happens you can't assume that that -- you can't say, well, that's it al borrow will come out of there. We think it will come out of there and here are some fall back sites. What will happen this summer is there will be an additional look, an additional, you know, the environmental folks will go out and look at them again, the engineers will actually get in there and do a little sub-surface exploration and then there will be a reevaluation. Again, the license application was submitted on the basis of here are borrow sites and one or a combination of these will be used for the proiect and not all of them wil be used.

MR. ROSENTHAL: Will there be any additional



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1 leaching caused by inundating these areas, making it part of the
2 resevoir?

3 MR. THRALL: It's all just river gravels 4 and stuff. No, the materials -- you mean -- You're talking about 5 disposing of the spoil materials in the resevoir? 6 MR. ROSENTHAL: Yes. 7 MR. THRALL: No, it's all -- it's all . 8 MR. ROSENTHAL: How do you recontour a borrow 9 site to allow -- to minimise erosion of the sides and stuff? 10 MR. THRALL: Cut down slopes so you don't 11 have a steep slope. You recontour -- it depends on what the 12 drainage is. There are a number of things. One of the things 13 you can do with some borrow sites is you can take them and turn 14 them into ponds for fish and you go in and you don't want it to 15 be totally rectangular. You go and you smooth out, you put some 16 curves so it looks naturally put it and you change your slopes 17 so they're stable, revegetate any slopes that aren't, you know, 18 pretty flat. You revegetate as much as you can. 19 MR. SCORDELIS: There's quite a few techniques 20 described in the erosion and sedimentation control best management

22 list. In fact, I think the general headings are described in 23 here and specifics are mentioned in the manual itself.

21 ...anual.

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MR. ARMINSKI: Any other comments? Bruce? MR. BEDARD: I have just a couple. On the

Terraces across streams, just -- I could go through the



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1 orrow sites as you've identified them is there any way of being ² more site specific like range, township and such? I found some 3 difficulty trying to exactly determine where they're at, especially 4 when I was addressing who the owners might be. My cursory deter-5 mination is that all but site D were in fact private land. The 6 other point I had that -- whatever site quarry, as well as borrow 7 sites are used I have a concern about oil storage facility for 8 refueling the vast amount of vehicles that will be used for moving 9 this and that the facilities should be established some -- at 10 some location with a protective curtained area where the vehicles 11 would have to go to that area to be refueled rather than at the 12 sites themselves. This is just a suggestion. Also, I had a con-13 cern about this so called pit that would create a lake for fisheries. 14 Has anyone determined a depth? Because in that particular part 15 of the country you need at least 40 feet of water for any kind 16 of fish to survive a winter.

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MR. SCORDELIS: 40 feet?

MR. BEDARD: 40 feet because of your ice
freeze and then your oxygen level. In the winter time the water
reverses and the oxygen level gets real small. If you don't have
a certain depth fish just won't live. There's some fisheries
people here I believe will back me up on that.

23 MR. SCORDELIS: This particular borrow site 24 reclamation is a biggy in that mitigation plan. So it will be 25 addressed there. I don't know if they're aware of 40 feet. I



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1 was thinking 10 to 20 feet. 2 MR. THRALL: Isn't this down in the river 3 channel? 4 MR. SCORDELIS: Well. it's to the side of 5 the Susitna River. 6 MR. THRALL: So, Bruce, you're going to get 7 some riverwater upwelling. It's not going to be quite the same 8 as a --9 MR. BEDARD: -- The only thing I was con-10 cerned was I know of some lakes inland in Alaska that have been 11 stocked and the fish die out in the winter because there's no 12 oxygen. 13 MR. THRALL: That will be taken under con-14 sideration. 15 MR. GRANATA: Are you looking at relatively 16 shallow borrow site withdrawals? 17 That hasn't been decided. MR. SCORDELIS: 18 MR. GRANATA: It would depend upon --19 MR. SCORDELIS: -- One thing it would depend 20 upon is where the material is, to what depth. The other thing 21 is what the Power Authority wants to force the contractor to do 22 so that the mitigation measures are met. 23 MR. THRALL: Again, depending on whether 24 a guy wants to make a bid on a certain size trucks and certain 25 size haul distances or if he wants to put in a conveyor, a belt



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1 to, you know, dig it out and dump it and haul it. We know there's
2 enough borrow, we know that the best locations have been iden3 tified and when a guy bids on the job if he can save X million
4 dollars on his bid -- on his cost based on placing fill in a
5 slightly different manner that has to be -- he has to be allowed
6 that freedom.

MR. ROSENBERG: Just to give me an idea of 7 this conceptually, how is this going to be? Is it going to be 8 like borrow site E is that going to be a series of little pits 9 throughout that area or is it just going to be one huge withdrawal? 10 MR. ARMINSKI: I don't think anybody knows. 11 MR. THRALL: They'll start out in one spot 12 and -- Hank, I think they opened up on Terror Lake didn't they 13 go in and open things up incrementally? 14

MR. HOSKINS: Right.

15

MR. THRALL: They had an overall site and 16 they started over in this corner of it. And again, when you -- any 17 time you start digging your -- what you find as you dig is based 18 on, you know, a lot of geologists looking at it and their experi-19 ence and a few holes you sunk in the ground. But you don't know 20 exactly -- you always find surprises any time you start going 21 sub surface. And so if they start on one borrow site are and 22 they open up one corner of it and they get into it a little ways 23 and they run into something that makes it just not suitable as 24 material they're going to start moving. Hopefully they would 25



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1 stay within that site but then they might have to move to another ² site. I don't know. That's a real difficult thing to guess. 3 We think -- I talked to our engineering people and they think that 4 the borrow quality is going to be great. They don't see it as 5 any big problem. But if I got them up here to raise their hands 6 and swear to you they wouldn't do it. 7 MR. GRANATA: What kind of surprises? Flowing 8 aquifers? 9 MR. THRALL: Flowing aquifers, running into 10 silts or running into --11 MR. GRANATA: -- Is that the big surprise? --12 MR. MARCHEGIANI: Say we run into a clay 13 layer that we haven't expected. Well, we have a desires or a 14 need for X amount of clay for let's say the core. 15 MR. GRANATA: That's a good surprise. 16 MR. MARCHEGIANI: Well, no it may be a bad 17 surprise because we already have plenty of clay. We need gravel 18 to face each side of it and all of a sudden we planned on that 19 gravel and it's not there. 20 MR. THRALL: Again, I talked to the engineers 21 and sitting in their office, face to face, across the desk talking 22 to me they'll say, you know, the last thing in the world we expect 23 is any real problem with the quality of borrow materials. But 24 it's sort of like, you know, asking a biologist to speculate, 25 you know, about what might happen in a certain habitat, he's



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4	MR. ARMINSKI: Any other comments? That's
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7	END OF PROCEEDINGS
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1	<u>CERTIFICATE</u>								
2	UNITED STATES OF AMERICA)								
3) ss. STATE OF ALASKA)								
. 4	I, Barbara Brown, Notary Public in and for the State of Alaska residing at Anchorage Alaska and Reporten for Comini								
5	Alaska, residing at Anchorage, Alaska, and Reporter for Gemini 5 Reporting Services, do hereby certify:								
6	That the annexed and foregoing proceedings were taken by before me on the 22nd day of April, 1985, beginning at the hour								
7	of 8:30 a.m. at the Northern Lights Inn, Anchorage, Alaska;								
8	That these proceedings, as heretofore annexed, are a true and correct transcription of the proceedings, taken by me								
9									
10	I am not a relative, nor employee, nor attorney, nor counsel of any of the parties, nor am I financially interested								
11	in this action.								
12	IN WITNESS WHEREOF, I have hereunto set my hand and af- fixed by seal this 24th day of April, 1985.								
13									
14	Notary Public in and for Alaska	┞							
15	My commission expires 2/22/88 SEAL								
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