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EXXON VALDEZ OIL SPILL SETTLEMENT TRUSTEE COUNCIL

RESTORATION OFFICE Simpson Building 645 G Street Anchorage, Alaska

PUBLIC ADVISORY GROUP

April 20-21, 1995 9:00 a.m.

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VOLUME 1

April 20, 1995

EXXON VALUEZ OIL SPILL TRUSTEE COUNCIL ADMINISTRATIVE RECORD

PUBLIC ADVISORY GROUP MEMBERS in attendance:

MR. DOUGLAS MUTTER Designated Federal Officer on 4/20/95 Department of the Interior

and

MS. PAMELA BERGMANN Alternate Designated Federal Officer on 4/21/95 Department of the Interior

Public-at-Large MR. CHRISTOPHER BECK Forest Products MS. KIMBERLY BENTON Environmental MS. PAMELA BRODIE Local Government MR. DAVE COBB Conservation MR. CHIP DENNERLEIN Science/Academic DR. JOHN FRENCH Public-at-Large MR. JAMES KING Public-at-Large MR. VERN MCCORKLE Subsistence MS. BRENDA SCHWANTES Commercial Fishing MS. THEA THOMAS (4/20/95 p.m. only) Native Landowners MR. CHARLES TOTEMOFF (4/20/95 only) Public-at-Large MS. MARTHA VLASOFF (4/21/95 only) Public-at-Large MR. GORDON ZERBETZ MR. RUSS REDICK (Alt. for Rupert Andrews 4/20/95 a.m. only) Sport Hunting & Fishing

TRUSTEES COUNCIL STAFF

MS.	MOLLY MCCAMMON	Executive Director, EVOS Trustees Council
MR.	ERIC MYERS	Director of Operations, EVOS Trustees Council
MR.	BOB LOEFFLER	Director of Planning, EVOS Trustees Council
DR.	ROBERT SPIES	Chief Scientist, EVOS Trustees Council
DR.	STAN SENNER	Science Coordinator, EVOS Trustees Council
MS.	CHERRI WOMAC	EVOS Trustees Council staff

OTHERS PARTICIPANTS:

MS.	VERONICA GILBERT	Alaska Department of Natural Resources
DR.	DAVE GIBBONS	U.S. Forest Service
MR.	ALEX SWIDERSKI	Alaska Department of Law
DR.	PETER MCROY	University of Alaska Fairbanks
DR.	DAVID DUFFY	University of Alaska Anchorage
MR.	JIM BODKIN	National Biological Survey
DR.	JOE SULLIVAN	Alaska Department of Fish & Game
MR.	MARK KUWADA	Alaska Department of Fish & Game
MR.	ART WIENER	Alaska Department of Natural Resources
MR.	GARY MUEHLENHARDT	U.S. Fish & Wildlife Service
MR.	DAVE DEANS	Focus Company/Ellamar Properties

PROCEEDINGS

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(On Record 9:10 a.m., April 20, 1995)

MR. McCORKLE: Good morning, ladies and gentlemen, and 3 welcome group. We're not quite a quorum yet, so we won't be taking 4 5 votes on anything. We'll do some things provisionally. We'll call It's ten minutes past nine. the meeting to order. I'd like to 6 7 make some suggestions on modifications to the agenda, and then have any additions that you wish to make. I think I'd like to table the 8 9 election of the vice-chair until just after lunch. We'll take it 10 up the first item of business after lunch. That should give people who aren't here a chance to get here. Should we get all those who 11 12 have been nominated here before lunch, what I'd like to do is have those folks who made the nominations give a two or three minute 13 14 talk as to why you should receive those -- or should cast a vote for one candidate or the other and then We'll do the election 15 16 immediately thereafter, at lunch -- just after we come back from 17 lunch. That will give you a chance to caucus, talk and so forth. Are there any other changes, additions or corrections that you'd 18 19 like to make to the agenda? Hearing none, then We'll go ahead with the agenda as it is now amended, and those who received packets in 20 21 the mail should have received copies of the minutes of the March 22 23rd, 24th, PAG meeting. It's a piece of paper that looks like 23 this. Lots of names on the front and the following pages are the 24 I'll entertain a motion to provisionally adopt these. minutes. 25 We'll go ahead with the correction motion at the end of the 26 meeting, but formally adopt everything we do provisionally. Are

there any additions or corrections to the minutes of the March 1 23rd, 24th meeting of this group? 2 MR. ZERBETZ: I move that we approve the minutes as 3 4 read. So moved. 5 UNKNOWN: MR. McCORKLE: It's been moved and seconded the minutes 6 be approved as distributed. There being no dissenting votes --7 8 yes, Mr. King. I just have a question for Molly. MR. KING: 9 MR. MCCORKLE: Okay. 10 I don't know whether -it's not a MR. KING: 11 correction so ... 12 MR. McCORKLE: Well -- questions are in order. Go ahead. 13 On page three, it says that "McCammon MR. KING: 14 noted that the EVOS general settlement deals with public, natural 15 resources and related services but does not address human needs. 16 She described this as a failure of state and federal laws," and, 17 that confused me a little bit, and I'm wondering if that needs a 18 little clarification. 19 Chairman, I think actually --MS. McCAMMON: Mr. 20 probably a more clear way of describing it, and I think what I 21 actually said was that that this is an omission of the state and 22 federal laws. That the laws under which the settlement was reached 23 between the state and federal governments and the court deals with 24 injuries to public resources and not to injuries to cultural 25

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issues, in particular, and this is just something that is not

accommodated or addressed really within the laws by which the 1 settlement -- the settlement was reached. 2 Well, a lot of the personal losses were 3 MR. KING: compensated in other ways, isn't that correct in the -- from the 4 oil spill? 5 MS. McCAMMON: Personal losses were -- went through 6 private litigation, but not litigation that was done by the 7 8 governments on their behalf, but that was through the private -private plaintiffs. 9 10 MR. ZERBETZ: Mr. Chairman. MR. McCORKLE: May I ask, Jim, if you have a follow up 11 12 statement to that before Mr. Zerbetz? Are you recommending some 13 language change, Jim? 14 MR. KING: I'm just wondering how we react to this. 15 Are we ... MR. McCORKLE: Well, I have yet to find where you're 16 17 talking about. Would you tell me which paragraph and line, please. 18 MR. KING: Page three ... 19 MR. McCORKLE: Okay. 20 MR. KING: How do we react to it? (Indiscernible simultaneous talking) at this point should be? 21 22 MR. MCCORKLE: The reaction certainly should be if you -if you want to dispute what Molly said, she's here to indicate what 23 24 she did say. If she wants to make modifications or amendments 25 that's in order as well. Gordon. 26 I was just going to ask the writer if it MR. ZERBETZ:

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would be more appropriate in that sentence to -- where it states as 1 "a failure of state and federal laws," would it be more appropriate 2 to describe that as an omission in state and federal laws? 3 MS. McCAMMON: Mr. Chairman, I would -- I would say that 4 basically these issues are not addressed by the state and federal 5 laws that were part of this court settlement. 6 The human issues. MR. McCORKLE: 7 MS. McCAMMON: The human issues. 8 John. MR. McCORKLE: 9 Mr. Chairman, I'd like to recommend that DR. FRENCH: 10 we delete the second half of that phrase, "that she described as a 11 failure of state and federal laws." That tends to indicate a value 12 judgment, mostly of the type we're leaving out of the minutes, and 13 I just think it would be cleaner if we did not put in anything 14 reflecting a value judgment on the basis -- on the part of the 15 Executive Director in this item. 16 MR. McCAMMON: Okay. 17 It's been moved and seconded -- I assume MR. McCORKLE: 18 this can be in terms of a friendly amendment -- there is a motion 19 on the floor to adopt. What I understand the -- the group will be 20 voting on in a moment is the deletion of the following words in 21 that paragraph, which is captioned "McCammon." "She describes this 22 as a failure of the state and federal laws." Those words would be 23 deleted. Are you ready to vote? All in favor of the amendment say 24 25 aye. PAG MEMBERS: Aye. 26

the MR. McCORKLE: The motion (indiscernible) and 1 amendments carry. The motion is now to adopt the minutes of the 2 meeting of March 23 and 24. Are there any other comments you'd 3 like to make? Any corrections, additions? 4 MR. TOTEMOFF: Just one (indiscernible) 5 MR. MCCORKLE: Chuck. 6 Third page also. 7 MR. TOTEMOFF: 8 MR. McCORKLE: Right. There's a misspelling on Fiona Sodin. MR. TOTEMOFF: 9 Where's that? 10 MR. MCCORKLE: Second line to the bottom of where the MR. TOTEMOFF: 11 12 villagers testified. MR. McCORKLE: Okay. All right. 13 F-E-O-N-A, first name. MR. TOTEMOFF: 14 Fiona. MR. McCORKLE: 15 MR. TOTEMOFF: And, the last name is spelled, S-A-W-D-E-16 N. 17 MR. McCORKLE: Thank you, that correction should be made. 18 Any other additions or corrections, before we vote? No motion on 19 the adoption of the minutes all in favor say aye. 20 21 PAG MEMBERS: Aye. Opposed, no? And the minutes are adopted 22 MR. McCORKLE: as corrected and amended. Thank you very much. Next, I think I'd 23 like to ask for a call of the roll, even though we don't have a 24 full quorum here, let's establish who is here, and ask Doug Mutter 25 to do that for us please. 26

MR. MUTTER: Okay, Rupert Andrews? 1 I'm sitting in for him, Russ Redick. MR. RUSS REDICK: 2 Is that R-E-D-D-I-C-K? MR. MCCORKLE: 3 One D. MR. REDICK: 4 MR. McCORKLE: Oh, okay. R-E-D-I-C-K. And, where's your 5 home town, Russ. 6 7 MR. REDICK: Anchorage. Anchorage. We're delighted to have you MR. MCCORKLE: 8 here sitting in for Rupert today. I suppose he has explained to 9 you that until you've gone through the official process, that'll 10 we'll not be able to receive your vote, but we'll sure be glad to 11 have you feel free to comment and participate in any way you want, 12 and when you finally get the stamp of the process of rule, then 13 you'll be asked to vote when Rupert isn't here. Thank you very 14 much and welcome, and please continue with the roll. 15 16 MR. MUTTER: And, Ι do have Russ's paper (indiscernible). 17 Papers are here, okay, and process is MR. MCCORKLE: 18 19 moving. (Indiscernible) MR. MUTTER: Started. 20 Started, okay. MR. MCCORKLE: 21 Chris Beck? MR. MUTTER: 22 23 MR. BECK: Here. Karl Becker? (No response). Kim Benton? MR. MUTTER: 24 MS. BENTON: Here. 25 MR. MUTTER: Pam Brodie? 26

MS. BRODIE: Here. ° 1 Chip Cobb? (No response). MR. MUTTER: Dave 2 (No response). James Diehl? (No response). John Dennerlein? 3 French? 4 DR. FRENCH: Here. 5 MR. MUTTER: Jim King? 6 Here. 7 MR. KING: (No response). Vern Martha Vlasoff? 8 MR. MUTTER: McCorkle? 9 MR. McCORKLE: Here. 10 Brenda Schwantes? MR. MUTTER: 11 MS. SCHWANTES: Here. 12 Thea Thomas? (No response) Charles MR. MUTTER: 13 Totemoff? 14 MR. TOTEMOFF: Here. 15 Martha Vlasoff? (No response). Gordon MR. MUTTER: 16 17 Zerbetz? MR. ZERBETZ: Here. 18 MR. McCORKLE: What's the tally there? 19 We're three short of a quorum, so 20 MR. MUTTER: Nine. the votes that we have taken on the minutes and may take 21 subsequently will be -- will have to be ratified when a quorum 22 arrives. I think the only thing we really need to do is -- is to 23 tender the minutes. We can hear the report from the ad hoc 24 committee a little later, and vote that provisionally, as well. 25 The next item that we'd like to turn to is addressed for 9:10. 26

1 Molly McCammon will give us the report on the Trustee Council 2 meeting of March 31st and to report also on the community meetings 3 that she has participated in the last several days and weeks, which 4 conclude here in this room tonight at 6:30, which all of us are 5 invited to attend and participate. Molly, if you please.

Thank you, Mr. Chairman. I believe MS. McCAMMON: 6 everyone received copies of the Trustee Council's meeting of --7 from the meeting of March 31st. At that time the Council took 8 action on two major ecosystem projects. One, the nearshore 9 vertebrate predator package, the Council approved a little more 10 than \$600,000 to begin work on that ecosystem project. That's 11 expected to be a three to five year-long collective effort that 12 The second project was to fund will get underway this summer. 13 about 1.167 million for the APEX project, which is the sea birds-14 forage fish interaction project, and that also would begin this 15 summer and is expected to be a three to five year project. In 16 addition to action on those two major ecosystem projects, which 17 have been in the works over the winter, the Council also took 18 action on technical amendments to the AKI and Old Harbor 19 These had been approved by the Council at the 20 resolutions. November 2nd meeting last fall. The language that had been agreed 21 to related to the so-called reverter clause, and this was language 22 that gives the state government the ability to enforce against the 23 federal government for insuring that the purposes for which AKI and 24 Old Harbor acquisitions were done actually are achieved. In other 25 words, if the federal government obtains the AKI and Old Harbor 26

a comment

lands, they're supposed to protect them for certain purposes. This 1 2 gives the state government the ability to enforce that conservation easement, and likewise, when there's a state acquisition, the 3 federal agencies will also have that -- kind of enforcement 4 authority. In addition, the Council took action on a few technical 5 amendments to the FY '95 budget and these were authorizing funds 6 that were being transferred between Trustee agencies and between 7 projects. That pretty much concluded the Council's meeting on 8 9 March 31st, at this point there is not another meeting anticipated 10 probably until late May. We're still looking at trying to get the Council out to Cordova to hold a meeting there at that time and to 11 12 -- some of the projects and lands around Cordova. In addition to the Council meetings, there is, I believe in front of you, you 13 14 should also have a copy of the 1995 status report. This is an annual report that we started last year and will be done on an 15 16 annual basis, that reports on the status of the programs, the 17 status of all the injured resources and services, and also gives a financial summary, and if you would like additional copies of 18 19 these, these are going out to the entire mailing list, but if you would like additional copies, just contact us and we'd be happy to 20 21 provide them. Probably -- just part of our public outreach in the 22 last few weeks, we initiated a community meetings and almost all of 23 the communities in the spill area -- either myself or Director of 24 Operations Eric Myers has been at all of those, and the work sites I've been at in the last two weeks are Cordova, Tatitlek, Southeast 25 26 Kodiak and Kenai, and then, tonight is the last meeting scheduled

for this series here in Anchorage. In Cordova I spoke to the 1 Chamber of Commerce and had probably fifty to sixty people there, 2 and then also did an address to the city council. We also held 3 just kind of an open house public meeting, and the main comments 4 5 that we received at the open house were primarily -- there were 6 questions about the status of Eyak negotiations, and then also 7 there were a lot of questions about the Council's potential 8 consideration of Two Moon Bay, which is some lands owned by Tatitlek Corporation south of Tatitlek. 9 There was also some 10 questions about the SEA program and what the Council's intent for that project are in the future. At Tatitlek we had a very good 11 12 meeting there -- spent the entire day . Craig Tillery was -- I 13 should say Cordova, it was myself, Joe Sullivan and then Jim Wolfe 14 from the Forest Service was there. In Tatitlek it was myself and 15 Joe Sullivan and Craig Tillery with the Department of Law. And, we 16 flew over most of the Eyak lands, most of Tatitlek lands. We flew 17 over several of the small parcels, landed at Ellamar which is the proposed small parcel acquisition, and walked around there. Gary 18 19 Kompkoff who is the Village Council President took us out on his 20 boat and we went -- we toured Boulder Bay and Landmark Bay. We 21 looked at the site -- their mariculture site there, at their proposed -- where they're going to be doing clam restoration. 22 We 23 looked at their current museum site within the community building 24 and had a really good meeting with about twenty people that 25 afternoon. So -- so a real good opportunity to meet with folks in 26 the community. They have a lot going on there, and they have great

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oysters, what we were able to sample afterwards. Following the 1 meeting in Tatitlek, we flew to Valdez, spent the night there. The 2 next day met -- were on the local radio show, KCHU -- I think it 3 was KCHU -- out of Valdez which carried Sound-wise, it's a call-in 4 5 show. Actually there was guite a bit of interest in Valdez in the SEA activities the Council was doing. Last year when we were 6 7 there, almost all the calls were from Cordova, this year they were 8 almost all from Valdez, which I thought was positive, very 9 positive. We met with the mayor, gave a presentation to the Rotary Club that was well attended, and then the meeting that night -- oh, 10 and then Dave Kompkoff took for a tour of Solomon Gulch Hatchery. 11 And, the meeting that night we had about six people there. 12 Α 13 number of them were interested in Jack Bay, which is a proposed small parcel, that's being evaluated now. It's been offered up by 14 the university. These folks had concern about the logging at Two 15 Moon Bay and Hell's Hole, and then there was some interest in the 16 17 small parcel on duck flats, the Hayward parcel. Later, this was -those meetings were last week. After that we went to Kodiak, and 18 19 had a meeting there with about twenty people who were primarily 20 interested in the small parcel Termination Point, and they're very interested in having the Council purchase that and have it become 21 a state park for community use. The next day we did get a chance 22 23 to go out with the state park's person, Clair Holland, and tour the 24 site and walk around, and -- it's at the end of the road. It's --25 looks like it's a very promising possibility there. Yesterday, I 26 was in Kenai for a meeting there, met with Kenai Mayor John

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Williams, with the Borough Mayor John Gilman, give a presentation 1 to the Chamber of Commerce. Don Young also stopped in at the 2 Chamber of Commerce meeting. He was there at the same time. And, 3 there's a lot of interest in -- and then had our public meeting 4 5 last night and there were about ten people there. There's a lot of 6 interest still in the sockeye program, and also in a number of the 7 small parcels that are under consideration for the Kenai area. 8 Those were the meetings that I attended. Eric Myers, Director of 9 Operations, is here and he can report on the other meetings that we 10 held in the last two weeks.

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(Chip Dennerlein arrives at 9:25 a.m.)

MR. McCORKLE: Thank you, will you continue Eric?

MR. MYERS: Sure. Okay. There were a number of other 13 14 communities that I attended on behalf of Molly, and those included 15 Port Graham, we had a meeting in the early part of the month which 16 also coincided with the work of the subsistence group led by Rita 17 Miraglia, as well as representatives from the Department of 18 Community and Regional Affairs, so that we could -- in one setting 19 describe the various funding opportunities that exist, both the 20 civil settlement funding potential as well as the existing and ongoing criminal settlement monies that were appropriated in -- by 21 22 the legislature in Senate Bill 183. In Port Graham we had with us 23 as well Phil Mundy, who is a peer review scientist for Dr. Spies on 24 fisheries issues, and that was of particular interest in Port Graham because of the -- their interest in pursuing some fisheries 25 26 enhancement projects, pink salmon projects and a coho salmon

project, and Dr. Mundy was able to give some feedback to the -- to 1 2 the proposal developers right on the spot, which was -- which was Martha Vlasoff was also there, and was very helpful in helpful. 3 providing some insights into the development of some of the 4 proposals and some of the work on the part of the Trustee Council 5 involved in cultural artifacts repositories, and/or other 6 7 strategies to ensure the protection of cultural resources which was an issue of interest to the community members who participated in 8 Another issue that was identified was possible the meeting. 9 10 assistance to the private land owners in the area regarding protection of certain lands that the -- that are in proximity to 11 They're concerned about water quality effects that 12 the watershed. 13 might result as -- result of clear-cut logging, and that's an issue that the Village Council asked for assistance on to try and 14 facilitate some additional possible work between the private 15 16 landowners and the Trustee Council on a matter that Molly McCammon is -- and others are hope -- hoping to take up when they return to 17 Port Graham, in the near future. In Seldovia, we had a very small 18 19 turn out in Seldovia. It was largely comprised of representatives 20 of the Seldovia Native Corporation and a couple of representatives 21 of the city. We -- we didn't have a whole lot of ideas generated 22 as a result of that meeting. Mostly it was imparting basic information about the Trustee Council process. 23 In Nanwalek, we 24 again visited with the subsistence group, Rita Miraglia. In 25 Nanwalek, there was again interest expressed for guarding cultural 26 -- the cultural center, the possibility of developing a cultural

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center or some kind of repository, as well as some interest in 1 2 oyster mariculture. One of the -- actually one of the priorities that the -- that kept coming back to was the community's interest 3 their airstrip, in improvements to an essential form of 4 transportation, and we discussed that, actually repeatedly, and I 5 6 tried to help them understand both the opportunities as well as 7 some of the potential limitations of the -- of the civil settlement 8 funding, but that was clearly -- clearly their priority, or the priority of the folks who were speaking at the meeting. 9 In Homer, 10 we had, in addition to myself, Joe Sullivan from the Department of Fish & Game, as well as James Brady from the Department of Fish & 11 Game, were present to help with the discussions. 12 There was a strong turn out in support of -- expected support for the small 13 parcel habitat protection program, in particular the Overlook Park 14 15 parcel, which is one of the small parcels that's under active 16 consideration presently. It's a parcel just outside of Homer. We had a -- also, had a lot of interest expressed on the part of -- of 17 18 a number of fishermen regarding a restoration project that's been considered, some in the past and it's -- and it's undergoing 19 20 further consideration, the Port Dick salmon restoration project, a 21 project that would make accessible certain habitat in the region of Port Dick on the lower outside coast. It's currently inaccessible 22 23 as a result of uplift during the -- during the earthquake, as a way of trying to enhance the salmon spawning opportunities there that 24 would be essentially a replacement resource for commercial 25 26 fishermen in the commercial fishing service. We had a chance to

participate in a radio show the following day, sort of a call-in 1 2 radio show, and that was, I think, well received. We -- at least we didn't receive any -- any hostile calls, I'll put it in those 3 terms, and did have a chance to also visit the Overlook Park 4 parcels that following day, and that -- although it's not -- I 5 6 can't speak on behalf of the Habitat Work Group, but I can say it's a spectacular parcel, and I would -- I would like to see it 7 8 protected. Most recently, Dr. Spies and I went to -- we drove down 9 to Seward and then over to Chenega -- flew over to Chenega to visit 10 with the community there. We had a good -- a good work session, I guess -- I think I'd call it more of a work session than really a 11 big community meeting. Unfortunately, some of the -- a number of 12 the community residents were off to a SERVS training opportunity in 13 Whittier, but we did have a chance to visit at some length with 14 15 Chuck Totemoff, Gail Evanoff, and a number of other community 16 residents. Martha Vlasoff was also there. We had -- we had an 17 opportunity to review at some length a proposal that's been 18 developed by Chenega regarding a cultural repository -- cultural 19 artifacts repository in combination with a -- with some other space 20 needs that the corporation has. This could also possibly include 21 a staging area, or staging space to assist with the field 22 operations of Trustee Council-related research in western Prince 23 William Sound. And, there was -- we also had a chance to go out to 24 -- I went out to one of the -- one of the beaches myself, but there 25 was a chance to visit -- to get out on a couple of the beaches. 26 Ernie Piper and Diane Munson were there as well to review some of

the -- the status of some of the beaches out there that are of 1 2 concern to the community that have been -- that have been worked on some to date. I quess, I ask -- the other -- the other that we had 3 scheduled at another plan -- meeting we had planned was in Seward, 4 but due to weather, we ended up spending an extra day in Chenega, 5 which was actually very pleasant, and it turned out I had a chance 6 to hone my cribbage skills and had a chance to catch up on some 7 8 good eating at the local -- local hotel. But, I guess, Bob you can 9 -- and, as a result of that we were not able to hold a Seward 10 meeting, that was -- had to be postponed, and we'll have to get back to that, and maybe Bob, if you have any comments you'd like to 11 add to the Chenega meeting. I don't -- I don't know if -- a lot of 12 13 what I've said, of course, is very anecdotal, and there's certainly 14 a lot more that we discussed. I'm just sort of giving some of the highlights, and so this is not an exhaustive report by any means on 15 all of the issues we discussed at the -- at the various 16 17 communities.

18DR. SPIES:I believe you covered most of the points.19MS. McCAMMON:Well, we will be putting together a report20on the public meetings for the Trustee Council, and you'll be21getting copies of those, and it will be more official.

22 MR. McCORKLE: Well, thanks to Eric, and then Molly, do 23 you want to have the last word? Is there anything else you'd like 24 to wrap up on this topic?

25 MS. McCAMMON: Mr. Chairman, I think the only thing that 26 -- that we discussed this last week -- one thing I did want to

mention that Kodiak, in our visit there, we did tour the new Kodiak 1 2 Alutik Museum, which is having its grand opening on May 13, and it is going to be an incredible facility there. Something that --3 it's very nice. I think overall, just in -- just kind of the 4 response from the meetings, and I did a lot of these last year at 5 this same time, and I'm thinking about the comparison between last 6 year and this year, and I think a number of the communities -- a 7 8 number of them feel much better about the work the Council is They -- they think more is going on that is of particular 9 doing. 10 interest to them, that a lot of their needs and issues have been listened to and that the Council has responded to them, and I think 11 12 they can feel a lot more positive and involved in the process. There are still communities that -- that feel left out, that 13 nothing is happened for them, and we had guite a discussion about 14 this last week just internally about there -- there is still a 15 16 perception in Prince William Sound that the Council is doing nothing for Prince William Sound. And, in spite of the fact that, 17 of the more than \$20 million in projects every year, probably 18 19 ninety percent of them go to Prince William Sound, because there is no -- no museum that's been built there, there's no sea life center 20 there, there's nothing tangible, there is just -- and no large 21 22 parcel acquisitions have been completed there, there's this 23 perception that nothing has been -- has happened in Prince William 24 Sound, and this perception I think is primarily in the -- the larger communities of Cordova and Valdez. I don't think it's in --25 26 I think the small communities are feeling much more involved and

1 that things are going -- coming along. So, we had a lot of 2 discussion about more contact with the communities and getting a number -- more of the researchers to the communities and how to do 3 4 that, and make it more aware of the research programs, and how important it is to the spill area, and especially for Prince 5 William Sound and getting -- trying to get some more focus there. 6 7 Over on -- you always get the gamut of comments from, why are you buying land, that's a stupid idea, to why are you doing research, 8 that's a stupid idea, and everything in between, which, I think, 9 reflects the -- the mixture of comments the Council has gotten all 10 along, and I think, in terms of the Restoration Plan that was 11 12 adopted last year where the Council adopted the comprehensive 13 balanced approach of some of everything and a mixture -- I think that pretty accurately reflects the public sentiment, that there is 14 a lot of support for habitat protection, there's a lot of support 15 16 for good science, there's a lot of support for working with the 17 communities to figure out ways to address their needs and issues. So, overall it's been really -- it was really worthwhile going out 18 19 to the communities. We hope to do this again in the fall. Get out 20 to all of them, and continue this kind of communication and 21 contact.

22 MR. McCORKLE: Thank you, Molly. The PAG has always felt 23 that contact with the communities was really critical and we didn't 24 -- didn't know quite how it -- this could be done or proceed, but 25 we're glad to see this things. I'd like to have a prerogative of 26 the chair to insert a hyphenation in the program here for moment to

welcome Chip Dennerlein who is here, who has been here for a little 1 We're marching on toward a quorum if we get a few more 2 while. people. In a minute or two I'd like to ask the PAG if they would 3 like to address questions to Molly or Eric, but also I'd like to 4 turn to Dr. Spies and see if there is anything you'd like to add at 5 this point, so that we'll have had this little (indiscernible) 6 experts here, you each having an opportunity to talk to us for a 7 minute, and then you all may wish to ask them questions -- would 8 you yield to questions if any come from the group? Okay, Dr. 9 Spies, anything you'd like to say? 10

DR. SPIES: Sure. One thing that I would (indiscernible) somewhat pretty well, that we did have an opportunity on that meeting -- can you hear me?

UNKNOWN:

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No.

We did have an opportunity when we were DR. SPIES: 15 out at Chenega to visit one of the more heavily oiled beaches in 16 the area out on the north end of LaTouche, it's called LaTouche 20, 17 and it's a -- it's somewhat of a problematical beach that's been 18 worked on quite a bit. There is still pockets of oil there, and 19 we'd hope that perhaps that some kind of mechanical trimming of 20 that beach might be possible, but looking at it up close, it looks 21 like it's going to be difficult. So, the real -- the one real 22 option is to use PS-51, which is -- which is a chemical dispersant 23 that's been developed for potential oil recovery and that's a 24 fairly expensive process, but there's a lot of sentiment in that --25 continue to try to proceed. 26

MR. McCORKLE: Will you have lots of money?

DR. SPIES: ... proceed with that. I think we're --2 3 we're look -- that would be, oh, perhaps as much as a quarter of a million dollars for several hundred yards of beach. So, the mile 4 and a half of beach, you know, the cost would have been pretty 5 high, but that has to be, I think, balanced against all the other 6 things that want to be done, and -- and with conversations with 7 Chuck Totemoff and others, you know, I -- hopefully we'll get to 8 9 the point here very soon of having a prioritized list of -- of 10 those particular beaches around Chenega that they would like to see most -- the ones that they put the greatest emphasis on, and 11 12 hopefully we can move forward and do something, at least on some of 13 those, and you know, they have a real concern that the oil is in 14 their back yard, it's on their beaches still. You can still see 15 it. Whether it's doing harm or not, but it's there and it's, you know, it's remanent of the spill and something that can -- we can 16 17 do something about. So, it's a bit of a thorny problem in terms of 18 cost, but -- and technology, but I think there are -- there are 19 ways to make headway on those particular beaches.

20 MR. McCORKLE: Thank you very much. Members of the 21 group, would you like to have a question of any of these speakers 22 before we move on with the agenda? Pamela?

23 MS. BRODIE: What future plans are your -- for 24 community meetings? Is this something you do -- plan to do once a 25 year, or will there be more?

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MS. McCAMMON: Mr. Chairman, on a formal basis, we just

have once a year kind of put into our budget, but we go to the communities on an informal, irregular basis throughout the year, and we'll be going out to all of them again throughout the year.

4 MS. BRODIE: Could we have as much advance notice as 5 possible about when those meetings are?

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MR. McCORKLE: Tickets? (Laughter)

Yeah, it -- it was very difficult for 7 MS. McCAMMON: staff to set up the meetings, and one of the reasons we try to do 8 9 them in April is to get them before people start their summer 10 fishing activities and a lot of their spring harvest activities. A lot of the meetings, it was -- the dates were changed daily, just 11 12 up until the last minute, it was very -- it's very difficult to get 13 firm dates because we would get a date set and then someone would 14 call and there was a funeral in the community or, you know, 15 something unexpected would come up and then it would be changed. Yes, we'd be happy to get them to you as soon as we know them. 16

17 MS. BRODIE: Also, I just want to emphasize something that Molly said about people in Cordova and Valdez being unhappy. 18 19 Even though an enormous amount of money has been spent in Prince 20 William Sound, they don't feel like it's gotten attention. Ι really think it's human nature that people see a big difference 21 22 between money that seems to be spent on ephemeral things versus 23 money that's spent on permanent changes, and even though there is 24 a big demand for science, it doesn't have an obvious effect on a 25 lot of people's lives in those cases, whereas something which is 26 permanent is something they are aware of in perpetuity. It adds to

the heritage of the community, and I think it's very important when all the oil spill money is gone, that people will have permanent changes -- permanent improvements in their communities, otherwise I think people will say the money was frittered away, even if it wasn't, even if it was spent on good science, they will have that feeling of it's gone and what do we have.

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MR. McCORKLE: Chip, do you have a question? MR. DENNERLEIN: I do, and I ... MR. McCORKLE: (Indiscernible)

Well, both. The question I have, 10 MR. DENNERLEIN: however, I do have a question, in Valdez and Cordova, is there any 11 kind of obvious physical display in a prominent place about what is 12 happening in the area? I mention this and I'll preface it if there 13 My experience in the creation of Chilkat Bald Eagle 14 isn't. Preserve, for a small amount of money, we put a resource room in 15 16 the city hall, a corner of the city hall, and we spent three years to show that the Chilkat River had a late salmon run and that's why 17 it was -- you know, critical to the eagles, and you know the --18 some of you know the controversies of creating a preserve and of 19 the state preserve in Haines. A huge help was that every time 20 people went to a council meeting or something, in the corner was a 21 little set of maps and a photograph of the hydrologist working and 22 -- and you could go to the resource room and stop by, whether --23 and a lot of people passed through, because you go to a planning 24 commission meeting, you go to an assembly meeting, you go -- and so 25 I was wondering -- it occurred to me when we came in here last 26

meeting and here were all these great maps of what, at least we 1 were trying to buy at, you know, at Eyak and in different areas, if 2 there was some sort of simple physical display in -- in a few of 3 those communities that people could see the amount of effort that 4 was going on in terms of land and science, would be -- seem to be 5 6 an inexpensive way -- you sort of have a presence there 7 continually, and maybe a renting a wall or making an agreement with 8 the city council to have one resource wall that just even displays 9 some of the land status maps and had our 1-800 number, and somebody might not understand that map, I want to call up the Council, it 10 11 would be great, they would stay in contact with us. I think that 12 would be useful, and the other point is that I would echo Pam on -on the scheduling of the meetings. I know how difficult it is, but 13 some of us might have -- I have some business with the National 14 15 Park Service in Kodiak, they're opening a new headquarters to try 16 to deal with the far Kodiak coast, and I can go there anytime 17 that's most convenient, within reason, and if it's a possibility 18 that I could take care of business and take some of my own time to sit in on a Kodiak public meeting, for example, I would certainly 19 20 do that. So, there may be some advantages where we could sort of bootstrap, go to Homer, go to Seward, flying around the villages 21 22 might -- is difficult, but -- but in some of the communities, I 23 think it's reasonable that one or two of us might be able to, you 24 know, plug in, if we knew -- even though I know scheduling is 25 difficult.

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MR. McCORKLE: Thank you for that question.

MR. DENNERLEIN: Well, the resource room is still in question. What's the status of something out there on the ground?

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MS. McCAMMON: Mr. Chairman, I think that's a great idea. 3 I know that -- I mean what Valdez is really interested in -- has 4 always expressed interest in, and I'm not sure quite how this will 5 6 happen, is to have some kind of a visitor facility that has a historical, you know, retrospective, interpretive display of the 7 oil spill. Because Valdez and the Exxon Valdez go hand-in-hand, 8 9 there is a lot of public focus in that community on the oil spill, and they don't have anything that really describes that. 10 Now, whether, you know, it's always been real questionable whether that 11 is something that the civil trust funds could use. The Forest 12 Service is negotiating for purchase of some land using federal 13 criminal funds to have the -- a small visitor center, and I think 14 15 there is a lot of potential there for working with a community, 16 with the Forest Service, with -- with the State to see if -- to see what could be put together there with Visitors and Convention 17 Bureau, which also is setting aside money for some kind of a 18 visitor display. So, I think on a permanent basis, there is some 19 20 potential for talking to folks about that, and we intend to pursue that. On an interim basis, I think your idea of having a display 21 22 that kind of updates what the Council is doing and some of those things is a really good idea, and it's something we'll follow up on 23 24 and see if that's possible. The other kind of things that we were 25 thinking about is -- I think it's really important for the Council 26 to meet in the communities. I think it's great to have the Public

Advisory Group meet in communities, because this gives more visibility to the Council and what they're doing to have them meet in a community in the spill area. I think if we can have -- we've had a number of workshops in Cordova, if we could have maybe some other science forums periodically in some of the other communities, I think that would be really -- all kind of contribute to that.

7 MR. McCORKLE: John, you had a question and then we'll
8 come to Chris next.

9 DR. FRENCH: Well -- whether it's a guestion or not, I guess is relevant, I do want two things, first, very briefly, I do 10 want to re-emphasize Pam's comment. The more public -- the more 11 lead time you can give the public and individuals in communities, 12 the better off we're going to be in terms of trying to educate 13 If we had been able to get some of these stories to the 14 people. 15 public radio station before the meeting rather than after the 16 meeting, it grows out of your presence, I think there would have 17 been a lot more people interested in your public hearing, but on the other side, the more positive side, I think (indiscernible) 18 because you know I wasn't at the public hearings, but I think many 19 20 of the people who would vote on Determination Point property, 21 probably were the same ones that had come out (indiscernible) 149 22 lease sale meetings -- of hearings, and at that hearing there was a great deal of frustration and bitterness requested on oil spill 23 24 in general. The fact that you didn't hear that, I think is a very 25 positive statement towards the level of comfort people are feeling 26 about EVOS restoration doing right now. I think you're right, that

there is a -- generally a perception that is going in the right
 direction now.

Thank, John. Chris, do you have anything? MR. McCORKLE: 3 (Indiscernible) I'm commenting 4 MR. BECK: on the continued frustration of the folks in Prince William Sound. 5 Has 6 there been any documentation on -- on the number of jobs that have been developed by the science that's been done in that area. 7 Ι mean, is there some handy way of understanding how that \$20 million 8 9 a year, 90 percent of which has been spent in Prince William Sound, 10 who has received the -- who has actually put the job -- who has ended up with the money in their -- in their wallets as a result of 11 that spending, is some percentage of that can (indiscernible) one 12 say, well quite a bit of that has been spent by people who are 13 employed in this area? Is there information on that subject? 14

MS. McCAMMON: Mr. Chairman, we haven't had any definite, 15 you know, that specific. Certainly, almost all of the vessel 16 17 charters in most of these projects take advantage of using local 18 boats, almost all of those come out of Prince William Sound, which is quite a bit of additional income to the Sound. And, certainly, 19 I mean, probably the largest focus of the effort is down in Cordova 20 21 with the projects being done. The SEA program is being done 22 through the science center there. There's over \$2 million coming 23 in through the science center for that portion -- their portions of 24 their project, not counting the university portions, which also go through. 25

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DR. SPIES: Also, pink salmon and herring work going

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MS. McCAMMON: In addition, all the pink salmon and herring work is all going through Cordova, which basically hires local biologists. I don't have anything on that specifically, but that would be something that -- it would be useful to put together to have when -- when we go back to communities so we can explain those kind of things.

8 MR. BECK: For myself, it would be interesting to 9 know if people were to ask me about, and I don't really have a sense of -- at all, you know, then what percentages, employment 10 generated by that spending has ended up in the area. And, a minor 11 12 follow up question, I was curious on the notes from the Trustee Council, the reference to there be no collections -- no, that's the 13 wrong one, let's see -- to the maximum extent possible, if there 14 15 are questions to be done in conjunction with the hunting community. 16 Can you clarify that what that -- that -- those words mean?

MS. McCAMMON: There is a proposed collection in the N.P. 17 18 project for the fall, collection of harlequin ducks, and there's not been a final decision made on that proposed collection, and the 19 Council in -- as part of their approval of the project going 20 forward, wanted, to the extent possible, if there were to be 21 collections that they be done, since there is also a sport harvest 22 23 on harlequin ducks, that if possible the collection be done in 24 conjunction with the sport harvest. Now, I'm not sure that is going to be feasible, and the -- that proposal actually is still 25 26 under review and we don't have a recommendation on it yet, but you

will be informed of that recommendation before anything further 1 2 happens with it. We do have later in the agenda, we have one proposal that we do have a recommendation on. 3 (Dave Cobb arrived at 10:00 a.m.) 4 MR. McCORKLE: Let's go to Kim Benton and then we'll pick 5 up Chip, and we'll welcome Dave Cobb, nice to have you here. We're 6 just one shy of a quorum. Chip -- I mean, Kim, sorry. 7 8 MS. BENTON: Molly, one of the questions I have, in Kodiak, in the afternoon, I think it was following the community 9 10 meeting that you had there, the subsistence workshop. MS. McCAMMON: (Indiscernible). 11 Can you, were you there, can you tell us 12 MS. BENTON: 13 what happened at that meeting? I was only there for the first hour, and 14 MS. McCAMMON: there were folks from all of the Kodiak communities there. There 15 16 was very good representation. The feedback that I heard, Jim Fall and from Dianne Munson, and from others, was that it was very 17 focused, people really -- it was very productive. The major issue, 18 19 when I was there, that -- was problems with PFC on clam beaches. 20 There was over an hour and a half -- two hour discussion about -concern about PSP and whether there could be some kind of a program 21 to fund monitoring of local beaches. 22 23 MS. BENTON: The other question I had about that, I mean just looking at the villages that you visited, you didn't just 24 go to, you know let's say, Cordova and then expect all the villages 25

to come in, but in Kodiak, it was just Kodiak and then the villages

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came in. Is there a reason for that -- that nobody went out say to
 Port Lions or, you know, any of the other villages in the Kodiak
 region.

Part of the reason for Kodiak this year 4 MS. McCAMMON: was, just because of funding and logistics, it's impossible to --5 6 it would be -- it's difficult to hit every single community every single year, and the subsistence project has been working real 7 closely with the communities, and felt it was more effective to 8 bring folks in from all of those communities into one local -- for 9 10 a regional meeting, as opposed to going out to the individual communities. Within the next year we intend to get out to all of 11 12 the communities at some point.

13 So, you intend to do follow up meetings in MS. BENTON: 14 the communities this fall, I mean, some of those are areas -- I know subsistence that that -- like, I mean, a follow-up meeting the 15 next day for subsistence and they came in, but it doesn't sound 16 17 like there were a whole lot of villages represented at the -- at the restoration meeting, and I think some of it budget -- you know, 18 they'd rather -- they'd like to have people in their communities 19 20 talk about things rather than subsistence, from subsistence division, I'm not (indiscernible). 21

22 MR. McCORKLE: As a person who lived in the Bush for two 23 decades, I'd like to say, that once in a while we love to go to 24 town, so we were always looking forward to have meetings that took 25 place in town, so we could go there and shop. But, I do think 26 there is a great value to what -- what Kim has added. Chip.

just this is а quick This --1 MR. DENNERLEIN: question, Molly. You said we would be advised to the policy on 2 harlequin ducks. Could you tell me how we input into that policy? 3 I'm -- I'm very interested in bringing some concerns about that 4 issue to this group, or plugging into that decision. 5

6 MS. McCAMMON: Eleven a.m. collection policy, on the 7 agenda.

MR. DENNERLEIN: Thank you.

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9 MR. McCORKLE: Moving in that direction, I think we've 10 probably have had enough questions, and I'll entertain one or two 11 more if somebody has not already spoken, Chuck and then Mr. 12 Zerbetz,

MR. TOTEMOFF: Yeah, I just want to follow up on the 13 report, I know I was at the meeting in Chenega, there was a number 14 of other projects that were discussed. You know, I understood one 15 of the purposes of the public meetings was to discuss projects the 16 communities wanted to submit for FY '96. I just wanted to let you 17 know, the PAG, that there will be some projects come forward from 18 attending these -- I'm going to try to beat the deadline by May 19 1st, but, you know, it's going to be very difficult for us. 20

21 MR. MYERS: I didn't mean to suggest that that was the 22 only -- only project. There are a number of projects -- will be 23 coming forth from a number of the communities, I went to, but I 24 didn't enumerate them all.

MR. McCORKLE: Gordon.

MR. ZERBETZ: Yes, I should preface this comment, which

is not a question, with a statement that I am not a home video fan, 1 2 however, I think that it would be very helpful when any of our people, say from the Council or the staff, go out to some of these 3 smaller communities, if they would take a few video clips to bring 4 5 back to the PAG members, that would give us an idea of the -- of 6 some of our grass roots efforts. In particular, I was thinking 7 like of Chenega. I'm quite interested in the mussel bed 8 restoration, and it would have been very helpful to have had something like that. I don't know if you have any amateur 9 10 photographers in the core group there, but I think that would be 11 helpful.

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DR. SPIES: Some of us are very amateur.

MR. McCORKLE: One last question, then we'll let it be.
Mr. Dennerlein.

MR. DENNERLEIN: I'm sorry to belabor this but I --15 16 you've put me on here and now you've got my interest. I -- the 17 question is simple. The last time we had the public come before us and speak of a, sort of a coordinated village alliance approach to 18 19 the requesting projects, and a number of representatives from 20 different villages talked about an over-arching cooperation in 21 Prince William Sound. I'm curious, was there any evidence of that? Was the group present? Was there a sort of a participation, or 22 23 next step communication in evidence though any of these public 24 meetings? I didn't hear you mention that.

25 MR. MYERS: I can try to respond to that. Yes, there 26 has been discussions and there's an ongoing effort from an

1 association or consortium of -- of spill-affected communities, and 2 village interest for the purposes of further planning as well as 3 possibly implementation of various projects, so that's something 4 that's -- that is forthcoming, ongoing, and it was definitely 5 identified during the course of our meetings in -- in a couple of 6 different communities.

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MR. DENNERLEIN: Thanks.

8 MR. McCORKLE: Thank you, very much. We'll conclude the 9 commentary on that topic with a note from the Chair, which is that 10 the PAG's been very interested in the last -- at least the couple 11 of years since I've been watching, to carry on these negotiations 12 about -- carry on this educational process and get information to 13 the communities, and I think I have to say, in all sincerity, we've 14 had to get some trackings down the road before we had much to 15 report on, and there have been some very positive steps taken, the 16 newsletter is one, and the other communications that go to the 17 communities are other examples of how the Trustee Council and the PAG, in its advisory capacity, have tried to foster and encourage 18 19 communications at the grass roots level. Now, I think it would be 20 important, and I hope that the minutes will reflect, that perhaps 21 we should look and see if there can be of any other measures of 22 success as a result of what the Council is doing, perhaps from the 23 standpoint of economic support -- the communities -- as Molly 24 mentioned. There -- they happen in various - very unusual and 25 tangential way because they're not necessarily grand to a 26 community, but many times as things happen, that do provide some
economic assistance to communities, and people are always anxious to know about that, and seldom do we get a chance to address it, so there may be a vehicle for a spare over time to help communities know more particularly how the Council's actions are impacting them, not just scientifically, but economically as well. We'd like to -- Pam.

7 MS. BRODIE: I think that this is a valuable idea, but 8 it makes me a little nervous that this money would be regarded as 9 a public works fund, and I think we need to always keep in mind and 10 keep the message clear that these are restoration funds, not public 11 work funds.

MR. McCORKLE: Thank you for reminding us about that 12 important topic which is a good introduction to the next item on 13 14 the agenda. We -- I think most people have received in your packet a meeting summary of the -- of the ad hoc work group, that took up 15 a number of things that were placed in the parking lot agenda from 16 17 last meeting. And, there are reports of that -- that meeting that 18 took place by teleconference in the -- in the meeting, but on the second page there is a list of the PAG parking lot items. 19 It's a 20 list that looks like this and goes from one to thirteen, and when 21 you find that you'll see that item number one is clearly defined, 22 the PAG purpose and role and link with Trustee Council for their 23 ideas about the PAG role, and then there are items two, three, four 24 and five. I've asked to -- in addition to the minutes -- to the 25 data which is available in the minutes of that meeting, which we'll 26 call for acceptance of a little later, and ask Doug Mutter to come

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to us this morning and help us understand the purpose and the goals of the role of this group, particularly as it would be helpful to our new members, and Doug has put together some materials and a brief report, and I'd like to turn the microphone over to Doug now to talk to us with particularity to the -- the roles and the goals of this group as is set forth in the public decree. Doug Mutter.

7 Okay, basically what I have done is go MR. MUTTER: 8 through your PAG notebook in tab 4 and tab 5. Tab 4 contains 9 portions of the court settlements with the state and federal 10 government and Exxon and between the state and federal government, 11 and sort of highlighted some of the key definitions about what the 12 settlement is about, and also highlighted some information out of tab 5 which is the PAG, Advisory Group, background and guidelines, 13 14 which talks a little bit about the role and the intent of the Public Advisory Group, some of that comes from the Charter. 15 So, 16 what I'm going to do is read some of the highlighted sections, and 17 see if I cover the information about what the PAG is all about, and 18 perhaps -- Molly and Eric, if I miss something and you want to 19 expand on something, you guys can jump in. So, I'm just going to 20 read some -- some quotes here for you. Out of the agreement, it 21 says "the purposes is that the government shall jointly use all 22 natural resource damage recoveries for the purposes of restoring, replacing, enhancing, rehabilitating or acquiring the equivalence 23 24 of natural resources injured as a result of the oil spill, and reduce the lost services provided by such resources." 25

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MR. McCORKLE: Doug, I'm going to ask, would you read

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that one more time?

MR. MUTTER: Sure.

3 MR. McCORKLE: And, those who didn't get can catch 4 (indiscernible - simultaneous talking).

In hymnal tab 5C, page 2, at the -- top MR. MUTTER: 5 paragraph, the bottom of the paragraph, that's the Public Advisory 6 Group's background and guidelines, which -- I just lifted the quote 7 out of the settlement, and it's in the bottom of that paragraph, 8 and it says again, "the governments shall jointly use all natural 9 resource damage recoveries for purposes of restoring, replacing, 10 enhancing, rehabilitating or acquiring the equivalent of natural 11 resources injured as a result of the oil spill, and to reduce the 12 lost services provided by such resources." 13

MR. McCORKLE: And that's what we're here to do. Additional things will be pointed out as Doug continues the -important for us to get a clear vision of what that is. Thanks, Doug, go ahead.

Well, I thought I would read from the MR. MUTTER: 18 agreement what natural resources are, this is in tab 4A, page 5, 19 item C. Natural resources mean land, fish, wildlife, biota, air, 20 water, groundwater, drinking water supplies, and other such 21 resources belonging to, managed by, held in trust by, and 22 pertaining to or otherwise controlled by the United States, the 23 State or both the United States and the State. And, I think that 24 kind of gets back to the limiting factor that Molly was talking 25 about, in terms of what can be addressed. On that page, they also 26

1 talk about natural resource damages, and let me just briefly go through that, that's item D. . "Natural resource damages means 2 compensatory and remedial relief recoverable by the government in 3 their capacity as trustees of natural resources on behalf of the 4 public for injury to, destruction of, or loss of any and all 5 natural resources resulting from the oil spill, including costs of 6 7 damage assessment, cost compensation for loss injury, impairment, damage or destruction of natural resources, whether temporary or 8 9 permanent, or for loss of use value, non-use value, option value, amenity value, request value, existence value, consumer surplus, 10 economic rents, or any similar value of natural resources, and 11 three, cost of restoration, rehabilitation, or replacement of 12 13 injured natural resources or the acquisition of equivalent natural resources." So, if you wonder why there's been some confusion over 14 15 the past couple of years about what's in and what's out, I think 16 trying to figure out what all that means. And, tab 4B, which is 17 the state and federal agreements, on page 7 at the bottom, I have 18 saved the definition of restore or restoration. It means, "any action in addition to response and clean up activities required or 19 20 authorized by state or federal law which endeavors to restore to 21 their pre-spill condition, any natural resource injured, lost or 22 destroyed as a result of the oil spill, and the services provided 23 by that resource or which replaces or substitutes for the injured, 24 lost or destroyed resource and affected services. Restoration 25 includes all phases of injury assessments, restoration 26 replacements, and enhancement of natural resources and acquisition

of equivalent resources and services." That's a mouth full. 1 Let 2 me jump to the Public Advisory Group, on page 11 of that same tab, item number 4, this is the agreement between the governments, it 3 says, " the Trustees shall agree to an organizational structure for 4 5 decision-making under this MOA and shall establish procedures providing for meaningful public participation in the injury 6 7 assessment and restoration process, which shall include establishment of a Public Advisory Group." So, that's where the 8 Public Advisory Group comes from. And, if I can jump onto tab 5D, 9 10 page 1, this is information -- in item 2 which comes out of the Charter of the Public Advisory Group. It says, "the Public 11 Advisory Group shall advise the Trustees with respect to the 12 following matters, all decisions relating to injury assessment, 13 restoration activities, and other use of natural resource damage 14 15 recoveries obtained by the government, including all decisions 16 regarding planning, evaluation and allocation of available funds, planning, evaluation and conduct of injury assessments, planning, 17 evaluation and conduct of restoration activities, and 18 the 19 coordination of those three items." Jumping back to page 4, at the 20 bottom, number 9, it talks about administrative authority -- "it is 21 the Public Advisory Group's functions are advisory only, and its 22 officers shall have no administrative authority by virtue of their 23 membership except to recommend to the Public Advisory Group --24 recommend the Public Advisory Group budget needs to the Executive Director." The next tab, tab 5C on page 3, there is a section D 25 26 called "Intent" which was added, I think, a year and a half or so

ago by the Trustee Council, to help the PAG clarify what their role 1 is. Let me just read a few highlights from that, and I'll be done. 2 On the first paragraph, "it is not the intent of the Council that 3 the Public Advisory Group be the Council's sole source of public 4 involvement and public opinions, nor is it the intent of the 5 Council that the Public Advisory Group seek public involvement, 6 except as specifically requested by the Council." In the next 7 paragraph it says, " it is the Council's intent that the diversity 8 of interests and views held by Public Advisory Group members 9 contribute to wide-ranging discussions that will be of benefit to 10 It is not the intent of the Council that the Trustee Council. 11 individual Public Advisory Group members be the only spokesperson 12 for specific interests, or that the Public Advisory Group filter or 13 direct general public comment." In the third paragraph it goes on 14 to say, "the Trustee Council believes that preserving this spectrum 15 of views and any subset," meaning ad hoc subcommittees, "to be a 16 difficult task, and, therefore the use of subcommittees or subsets 17 will be extremely limited and subject to the approval of the 18 Trustee Council." Let me read one more item on page 6 regarding 19 It says, "the Public Advisory Group shall program operations. 20 advise the Trustee Council and its Restoration Office on the 21 operation of the restoration program and related activities, 22 including the process for obtaining public input." 23

24 MR. McCORKLE: Thank you, Doug, does that raise any 25 questions anybody would like to have some back-up clarification or 26 follow-through on those because I really appreciate that comment, and beg the indulgence of those PAG members who are returning to their second term, although it's very refreshing and instructive, even for me to have that bit of backgrounding. I hope it's helpful to new ones. I saw a hand from John French.

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Yeah, Vern, I mean I -- I think the scope 5 DR. FRENCH: -- potential scope is pretty well laid out in -- in what Doug has 6 7 put forward and in the document. Specifically, with -- in terms of the restoration advice as outlined under duties on page 6, it's my 8 feeling that with the exception of advocating the formation of a 9 restoration reserve in the past, the Public Advisory Group has 10 11 primarily been on the evaluation and allocation, and of all three of those duties that are listed there, not so much on the planning 12 and the overall -- looking at the overall scope of the direction 13 that this process should go. Often we've been presented, 14 basically, drafted work plans and all that. I think -- my comment 15 16 and -- is to get back into the discussions of our ad hoc group too. It will come out again. I think we have the opportunity, as the 17 18 Public Advisory Group, to take a broader role in planning than we 19 currently have and I think at some point we may wish to discuss 20 that.

21 MR. McCORKLE: Would you like to amplify that a bit now, 22 John, since you've brought it to the floor, and it is on the 23 agenda.

DR. FRENCH: You know, I think with respect to comments on (indiscernible) saying, with respect to global approaches. You know, I think if there are areas such as the extent of the -- well,

this afternoon, for example, we're going to be presented with two 1 -- three project areas, I guess, saying that with respect to fairly 2 broad ecosystem approaches, and the scientific realm, and some of 3 those, you know, we may agree with the area of emphasis, some of 4 them we may feel there is something lacking, and so I would think 5 6 -- I would be very hopeful that the Public Advisory Group is 7 willing to take a position that says, you know, we feel that this research is being too tightly directed on harlequin ducks, or that 8 9 it's focused solely on the hydrodynamics of Prince William Sound, which don't drive themselves in a vacuum. 10 Those are actually 11 fairly specific items as opposed to really being global, but the best example of global, in my mind, is -- is the concept we've 12 13 already worked on the last two years, and that's the restoration The perception that research and monitoring activities 14 reserve. 15 are going to have to proceed beyond the year 2001, the end of the 16 payments, the end of the fund, and that a mechanism has to be found 17 to enable that to happen, and we were fairly focal advocates of 18 that, and I think it's been happening, and hopefully will continue to happen. But, I think there is overall gaps in the approach. 19 20 Some are -- some have been filled in with the Restoration Plan, and the Restoration Plan certainly limits the -- the global nature of 21 22 additional discussions, but I think there is -- there has been a 23 reluctance to say, we really need to do this or that, until it comes to us in a work plan, and I just -- I don't think we should 24 25 be shy about doing that, if somebody has an idea that needs to be 26 -- they feel need to be pursued ahead of time.

MR. McCORKLE: John, is it also your view that the group 1 can be even more successful at passing on public input than it has 2 been in the past, if it tends to focus on broader or more global 3 4 issues, rather than to become completely involved in the minute details of any and all of the programs that come before us. 5 I know that we've spent hours and days sometimes on very small details, б perhaps missing opportunities to address global - more global 7 (indiscernible -8 issues. Is that what you're trying to 9 simultaneous talking).

10 DR. FRENCH: Yes, I think that if there is an area that we need, we as the group feel needs to be addressed, whether it's 11 in habitat acquisition, research monitoring, whatever aspect of the 12 13 Restoration Plan. If there is an area that we feel needs more emphasis or has been slighted, we bring that to the Trustee 14 15 Council's attention before the work plan is developed, it has a 16 much greater chance of being incorporated into the work plan than if we get -- deal with inertia of the work plan and say, oh, you 17 18 know, this needs -- can we stretch this a little bit. I mean, 19 stretching an existing work plan that's already been drafted is 20 fairly limited in terms of our capabilities to impact things 21 overall, where if we can bring it to the Council's attention prior 22 to the formation of the work plan, why, I think there are real opportunities there, and I think often we've been caught up in 23 inertia partly because of -- just the scheduling that we've been on 24 -- we've had full agendas. But, I think if -- if we, as members of 25 26 the -- representative members of the public are willing to think

about what areas do need the most emphasis within the work plan, we
 -- I mean the Restoration Plan, sorry -- I think we could be very
 beneficial to the Trustee Council in providing that input.

Thank you, we have several more minutes 4 MR. McCORKLE: for discussions, I'm not trying to limit our discussion at all, but 5 6 we'd like to also focus on the items that Doug has brought before us, before we then continue on with the project. 7 Anymore discussion or questions, or clarifications you might like to have 8 9 on things that Doug has brought up? I mention that this is all in 10 our manual, and we all have plenty of things to read and you might not have gotten to each of those pages yet, but everything that he 11 reported to us on, is in our books. It's all in the book, and so 12 13 it's there for us to see, but sometimes we -- we need to have that 14 data more readily available, so we get down to tab 4, 5 or 6. Pam.

15 MS. BRODIE: I do think that our efforts are spent on 16 big picture things than globalizing units and perhaps looking for 17 things that are being left out of the process, rather than commenting on each individual project, not that that -- not that I 18 would characterize that as trivial, but rather that we're -- we're 19 not well equipped to make a significant difference to really -- to 20 really judge these projects. I would offer, at this point, a 21 22 suggestion of one area that I think is neglected, and that is the 23 area of management of existing -- of resources that are now in public ownership. There are a number of things that are happening 24 25 in the political world which are going to cause damage to resources 26 that were already injured in the oil spill, and this is not a

1 question of things happening in private lands that -- in which purchasing them could prevent the problem, but rather damage to 2 public lands and public waters, and these questions are considered 3 in other public forums, but they are not -- they have not been 4 considered in -- by the Trustee Council, as Trustee Council 5 6 matters, and I think there is severe -- there are very good reasons why they should be. Particular, I'm talking about oil lease sales 7 8 in public waters and what is going to happen -- what looks like is going to happen of massive logging on National Forest and State 9 forest lands in the oil spill area. 10

MR. McCORKLE: Thank you, Pam. Kim, did you have a point? No. Chris, and then Jim. Pick up the mike, thank you. We want to hear all this comment.

14 MR. BECK: I guess I'll just fall in the heels of the two previous comments. I feel like I'm almost bursting with the 15 urge to jump into this question of how we broaden the benefits of 16 17 this expenditure of \$900 million. Looking forward to the rest of the day. I -- personally, I have a lot of ideas of how we might do 18 that, and I very much agree with the previous points that while we 19 20 can't spend a lot of our time working on the details which are 21 important, I think that it's very worthwhile that as a group we 22 have a discussion about how we might broaden our efforts. I think 23 I recognize that, you know, as Doug has read to us, that we do have -- fairly confined initial starting points for what our efforts can 24 25 entail, but looking at what the current efforts take under, you 26 know, at looking at the science and the acquisition program, it

seems like there has already been a fairly generous interpretation 1 of what can be done with that money, and I think it's possible to 2 3 do double duty with a lot of our efforts, and I think we can do things which serve the -- the letter of the law, but also bring 4 5 about a host of secondary benefits if we appressively try to do that. So, that will be the thrust of a lot of my participation in 6 7 this effort. I, particularly think in the area of information. 8 Chip commented that -- putting information into Valdez. I think 9 there is a whole lot of things we can do in that regard. I'm not sure about whether or not the group appropriately ought to be 10 11 directly involved in management of public lands, but I think we can indirectly influence management of public lands by the way in which 12 we make information available, and my sense is to date that much of 13 the information that has been gathered, is not very accessible, is 14 15 hard to use, and therefore isn't influencing management of public lands like it might be. So, I'm just -- that is just an intro to 16 what I hope will be the discussion of the rest of the day. 17

MR. McCORKLE: Thank you, very much. Jim King, next.

19 MR. KING: I had this thought in the past that maybe 20 the committee ought to be devoting more time to sort of review of 21 policy, rather than review of scientific proposals, which --22 perhaps most, even all of us, are not well qualified to, and that 23 -- I guess this would be a question for Doug, is there something in the manual that suggests that we work on policy issues? 24 That's a 25 broad concept related to the work of the Trustee Council.

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MR. MUTTER: What my view is -- I think that the

1 mandate to the PAG is to work around the policy -- I mean, when you
2 look at the list of activities that they've identified there, I
3 think that in general they are saying advise us on where we ought
4 to be going with this. So, I think that's fair game.

MR. McCORKLE: There is nothing that I know of -- that is 5 I can recall, and I'll be corrected if I'm mistaken, but there is 6 7 nothing that prohibits us from commenting on or advising on policy. The policy that we've could advise and focus on is that which is 8 9 called for in the settlement, and that's who -- to be in this discussion that we're having today, is really taking a rather 10 historic note, and I encourage everyone to wait for the minutes of 11 12 this meeting and read it, because I think it's going to help us produce a new agenda for our actions in the next term, because some 13 14 of the -- there are at least three significant areas that have been suggested by PAG members in the discussion this morning, that 15 should come back in the future meeting, in the form of our policy 16 17 or recommendation, advice or in a motion. So, I'm very encouraged by this morning's discussion. Is there anything further? Chip. 18

I'd just like to add on the heels of 19 MR. DENNERLEIN: 20 this, and maybe this is in sort of a folksy way, but my experience, 21 though not as specifically chartered, was recently with the Denali 22 Task Force, I may have mentioned before, and it was chartered to a National Parks System Advisory Board. We're just a group of 23 24 sixteen Alaskans and sat down and wrestled with issues for about six or nine months, we didn't manage anything, we had no portfolio 25 26 to make regulations, we didn't do any programs, and at one point

the Park Service asked, well -- you know, what is -- really do you 1 2 think this is, Chip? And, I said this is -- this is the best damn scoping session the government will ever get on what is achievable 3 in, you know, in Denali, and that is what -- one of the ways that 4 I view this, and it goes to Pam's and John's comment in both ways, 5 we not only sort of review projects, but we sort of scope out. I 6 7 think we have two benefits to the Trustee Council. One, is that while we're just citizens, we have the benefit of talking amongst 8 9 different interests, so we're a pretty good read to them about not what the first comment might be at the public meeting, but if you 10 had a chance to talk this project through and educate the public, 11 would most people of different interests find this a reasonable 12 13 approach. We're sort of a little bit of testing tanks for that because we have different interests, and we have a little more time 14 15 to sort of chomp on things, a little more information than just showing up at -- at a hearing, and that interchange of ideas, I 16 think, gives some very good hints to the Council about what is 17 18 reasonable. For the same -- in the same vein, I think that -- that what I'm hearing this morning is some sort of proactive scoping, 19 20 some things that we might suggest to them from a different -- from a variety of community of interests, where they might move towards, 21 rather than just editing or reviewing a decision, but scoping out 22 23 some things that might be positive and move towards. I think those two -- sort of giving the hints to the Trustees about what we think 24 25 would fly that they have produced, and some hints about what they might do in addition, I think are both legitimate. I think, as I 26

listen to Doug, they fall within the -- the Charter that we have, 1 they don't make us anything -- super citizens -- we don't go out and 2 hold our own public hearings, but we have the chance among 3 different interests to sort of challenge each others conclusions 4 and assumptions, and say, hey, after we mix this up, here's a hint 5 for you Trustees, you -- you might try to go this way. 6 I think 7 that will happen today. My experience on the Denali Task Force though, while we were without portfolio in one sense, somebody 8 9 called me just the other day and said again, boy, this is one plan that isn't getting any dust on the shelf, because I think that the 10 agencies recognized that, in fact, there was some very realistic 11 suggestions there, and they're being put to use in a variety of 12 13 different ways. So, I sort of view that our most important mission, that that sort of giver of hints, or scoping to the 14 Council in both review and proactive suggestions. 15

16 MR. McCORKLE: Have you ever thought of going into the 17 ministry? Such a convincing speaker. Thank you, very much for 18 those comments.

19MR. DENNERLEIN:Somebody asked me about that, vacuum20cleaners or could be evangelism, I'm not sure which ...

21MR. McCORKLE: Molly McCammon has asked ...22(Indiscernible - laughter)

MS. McCAMMON: Mr. Chairman, if I could just comment real briefly on this. I think in the last couple of years, the last year and a half for sure, the Public Advisory Group has played a much more active role in our planning. The PAG had representation

1 that all of the planning work shops that we held last year, the PAG had two meetings before the draft work plan was put together, and 2 then one before -- an additional one before the final work plan was 3 put together. We very much welcome your looking at the work plan 4 with a global view as to whether it makes sense from the big 5 picture, broad perspective. We very much -- that kind of input is 6 something we don't get very much of, but it's really valuable to --7 to get it, and that is our intent for reviewing the draft 8 9 restoration program, this long-range plan is -- does this make sense, is there some big gap, is there some direction that is 10 taking off that you think is really inappropriate or just doesn't 11 12 make since. We really welcome your input on that. We also welcome your input on policies and there's, at least one on the agenda 13 today, on the collections policy, and I think as we go through the 14 15 draft restoration program, there was choices which kind of reflect different kinds of policies. The only caution that I would like to 16 17 put forward is that the Council did adopt the Restoration Plan last 18 fall, and there were a number of policies included in that. Ι 19 would just hope that we don't continue to rehash things that have been adopted, decisions have been made. Let's move forward with 20 those with what -- with the frame work that we have in front of us. 21 22 So, we really look forward to working with the PAG this coming year 23 on a number of issues that you have identified here.

24 MR. McCORKLE: Thank you for bringing us back to point.
25 Jim.

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MR. KING: All I'm going to say, is there a place on

our agenda to bring up these fairly extraneous things that perhaps
 haven't been brought up before, because I have one I would like to
 bring up.

MR. McCORKLE: There is always a place on the agenda, and 4 if, for nothing else, it will come under that item called "for the 5 good of the order" which we are not at now, but I hope you'll write 6 7 down that idea and let us -- We'll get to new ideas after a bit. We want to continue on, if you allow, with the agenda point that we 8 9 are on now, which is receiving the report of ad hoc group on the 10 parking lot, and one -- the first five things, of course, was the 11 report that we heard from Doug Mutter. In the -- in the report 12 I'll ask you to adopt later, there are a number of items, one 13 through nine, we've sort of got to a point now where I think we want to talk about point one, which is on the -- section H under 14 15 follow up for today's meeting. We wanted to talk a little bit 16 about -- I wanted to acknowledge the fact that they should have been in your packet, a copy of the Anchorage Daily News article 17 18 about Governor Knowles's fishing policy, and all of you have that, so that's number one, which brings us to then, point two, which is 19 20 a report that Dave Cobb has produced and published. I don't know 21 if that was in everyone's packet. It looks like this, but we do have the author himself here, so with your permission, I'd like to 22 turn to Dave now to talk about this. 23

24 MS. McCAMMON: I don't believe we have copies of that for 25 everyone. Do we (indiscernible)?

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MR. COBB: In fact, I don't have copy either.

51.

MR. McCORKLE: It's a kind of thing that talks about 1 2 trips to -- to the -- that we might take, and norms and gatekeepers and so forth. If we -- I'll tell you what we can do, while 3 we get that copied, let's leap forward to a couple of things I can 4 report on, and We'll just keep the agenda going, and take a brief 5 pause for a -- Doug to make those copies. Item three says that by 6 7 today, I will have consulted with Chuck Totemoff who has suddenly 8 absented himself from the room. These are the potential visit to 9 Chenega. When Chuck gets back, we -- Chuck and I have discussed 10 this and he will have a report to make on that. Cherri, on item number four, with regard to travel and liability and insurance 11 12 requirements for PAG field trips, is that study completed yet, or is it still ongoing? 13

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STAFF: Still working on it.

15 She is still working on it. Why don't we MR. McCORKLE: 16 take trip, it's important that we take them in such a way and manner that if there should be a problem along the way, we have the 17 18 right liability coverage. Item five has been summarized at the top of the menu because I didn't know how long Doug could stay with us. 19 20 He has left a previous meeting to be here with us today, and so he will now be free to leave whenever he wishes. We've been rejoined 21 22 by Chuck Totemoff -- on item three of the list of nine items in the 23 ad hoc report, is the report that Chuck and I are to make relative 24 to the potential of visiting in Chenega. So, Chuck would you like 25 to tell us if -- if you had a chance to discuss that with your 26 people and whether or not that might be possible to do at some time

1 || in the future.

2 MR. TOTEMOFF: Yeah, I did discuss it with my Board of Directors at our last meeting here in -- since last Sunday, had a 3 telephone conversation with you, Vern, last week about this and I 4 brought it up with my board, and they pretty much concluded that it 5 was a good idea, you know, to have the PAG come to Chenega right 6 after the drill in September. The reason for that is that, you 7 8 know, I think it would be a good idea for the PAG to see an actual drill taking place in the Sound, and then once that is done, you 9 can come immediately following the next day, the entire PAG make it 10 a day trip because there is limited facilities in Chenega. Because 11 if we got the entire PAG of 17, plus staff, you know, you could 12 potentially have 25 people in Chenega, and that's almost a quarter 13 of the population of Chenega, so, I think we better make it a day 14 15 trip. But, yeah, as far as Chenega is concerned, we stand ready to host a PAG meeting in Chenega, and I'm prepared to give a 16 presentation to the entire body about what happened to us during 17 the oil spill and subsequent years. 18

19 MR. MCCORKLE: Okay, thank you. That's good а introduction then, I quess, going back to the very front page of 20 the teleconference minutes, and you see down there, item G, 21 22 summary. A couple of options that were discussed in the teleconference that we'd like to lay before you as a potential 23 field trip. There is an option one and an option two, with regard 24 25 to the field trip , they both span fiscal years '95 and '96, and you see by the notes there that if we should elect option one, which is 26

a trip to Valdez in September, and a side trip to Chenega, and 1 later a trip to Kodiak in January -- require some -- understanding 2 we're talking -- we're spanning two fiscal years there and there 3 might be additional costs for trip to -- to Chenega. So, I think 4 I'd like to entertain discussions now. Maybe, we could start with 5 representatives who would like to speak on behalf of Valdez, Kodiak 6 and Chenega and those trips, and then open it to the floor for any 7 of the other suggestions that the group might have for where they 8 would like to go. And, we'll come back and pick up Dave's report 9 as soon as we finish with this. So, we've just heard from Chuck 10 Totemoff saying that the community would be delighted to have us 11 make arrangements to come visit, and there has been a proposal that 12 Chenega occur either on a trip to Valdez, or on a trip to Kodiak. 13 So, what would you like to do. Dave. 14

I guess I -- this is kind of part of my MR. COBB: 15 As I mention in the report, the Sea River Maritime or 16 report. Exxon Oil Spill training drill in the Prince William Sound will 17 take place somewhere very close to Chenega. So, as I looked at 18 accommodations and available boats and things like that, I talked 19 to Stan Stephens Charters, and the Nautilus, which he would use, 20 has accommodations for about twenty to twenty-five people, 21 overnight accommodations and food so that you would be out actually 22 in the Sound all of the time during the drill, but as Chuck 23 mentioned, it would be very easy to go from the spill site to 24 Chenega Bay in a couple of hours where we would -- you know, you 25 could actually do everything that we talked about during the 26

telephone conference, all in the three day period. It might be a little bit hectic, especially when we want to look at some large parcels and some small parcels that are up for purchase.

MR. McCORKLE: Further discussion please. Chip.

MR. DENNERLEIN: I've been -- for those of us who have 5 6 been and spent time on boats, there's an added benefit to sort of 7 see it from the Sound perspective, I think. I think the -- I think 8 the time spent in -- in the environment and work it would stand 9 (indiscernible) buy a boat. It's a good tone to set for trip. It's sort of hard to quantify, but I think there -- there's some real 10 value -- that is what the marine environment is about, and then 11 this means very workable, getting a lot done in one trip. I think 12 13 Dave's done a great job, sort of try to pull this together, if it's 14 possible to do it. I think this would be some kind of trip that's 15 very worthwhile for us.

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MR. McCORKLE: John.

DR. FRENCH: Yeah, I concur with Chip. I think that it's a very valuable perspective, as long as we keep the budget from getting too inflated, and I think Dave is addressing some of that. The other item is, for some of us who have very busy September's, is it possible to keep it to a two-day meeting, it would be very beneficial.

23 MR. McCORKLE: There are some other, just points that we 24 will have to discuss along the way and that is whether or not this 25 can be budgeted, but I think continuing discussion right now is 26 certainly in order. There was a comment or two that came up during 1 the telephone conference as to the validity of visiting a 2 restoration spill activity, or drill. Some people have been on 3 them and thought they were pretty exciting, others have not, and 4 some ask questions as to whether or not that's what we -- we would 5 spend -- best spend our time looking at a drill, and so you might 6 want to have discussion on that. John.

7 DR. FRENCH: First of all, I think we need to make it 8 very clear, up front, drills are a mitigation activity, they're an 9 RCAC activity not a restoration activity -- enough said on that. I do think it is important that we keep track of what the other 10 11 entities, namely the RCAC in the mitigation and SERVS are doing, so I'm supportive of being there and viewing it. I do not personally 12 feel that it's worth us spending three days viewing the whole 13 I think if we can target the most meaningful part of the 14 drill. drill, I will be supportive of that, and I'm certainly supportive 15 16 of looking at some of the large parcels in it and visiting Chenega. 17 As I said, I would like to see us, if at all possible, keep it to 18 a two-day meeting, and keep it as much in the scope of the meeting 19 as possible, and that probably means very little formal meeting 20 type time, but we do try to visit as many of the EVOS restoration activities as possible, in addition to the SERVS activities. 21

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MR. McCORKLE: Molly.

MS. McCAMMON: Mr. Chairman, I concur with what Mr. French has just said. I think the timing can be such that a side benefit that you could at least observe a portion of the drill, but I think the primary purpose of the trip should be to review ongoing

proposed restoration activities. Now, those could include the 1 2 large and small parcel acquisition; it could include visiting one of, either PWSAC or VFDA or both hatcheries. We can coordinate 3 with the SEA program and with the forage fish program so that there 4 could be some -- visiting of some of the work that they're doing, 5 some of the hydroacoustic works so we can see out in the field 6 7 what, you know, maybe coordinate with their vessels, and get on and 8 see what the hydroacoustic work is doing, things like that, and once we have kind of a time to work around, then we can work with 9 10 the various projects to make those happen.

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MR. McCORKLE: Thank you. Dave.

Yeah, I certainly didn't want to imply 12 MR. COBB: 13 that, you know, we spend all the time in the drill because, you 14 know, all you've got to do is sit there and watch boats go around 15 and around, and that's not the purpose. One aspect that I think 16 may be important is when Molly was in Valdez last week, we met with 17 Bill Walker, who is the new president of RCAC, and he expressed a desire with us to sit down with their executive committee and 18 19 compare notes, so to speak, so that there is no duplication of 20 effort from the standpoint of projects and works, and things going 21 on like that. It wouldn't have to be a very long time, but you 22 know, just a short meeting with their executive board, if the PAG so did choose to do so. 23

24 MR. McCORKLE: I'd like to have more discussion. Sooner 25 or later we'll call for your suggestions as to what we should do 26 for these trips, select option one or two, or kind of ask for more 1 study, so discussion is really in order.

2 MR. BECK: (Indiscernible - out of range of 3 microphone) two options, (indiscernible) preferably to see Chenega. 4 Does option one mean not going to Chenega?

5 MR. McCORKLE: No, option one includes going to Chenega.
6 MR. BECK: But, in the fall (indiscernible) not in
7 fall.

8 MR. McCORKLE: Well, a time to -- the time to be 9 announced. If we want to sort of two-block Chenega into Valdez, 10 that, of course, would happen in September.

11 MR. BECK: Okay, I guess my only thought would be --12 better to see Chenega -- see more early in light -- you know, two 13 years since -- rather than hold off and doing it during '96. It 14 just seems helpful to learn more early in the process for a visit 15 later in it, if that what you are suggesting.

16

MR. McCORKLE: Pam.

I love field trips, I'd love to do all of 17 MS. BRODIE: these things and more, but I -- I'm very concerned about proper use 18 We've all seen news of restoration funds. 19 stories about politicians taking junkets to go study something in Hawaii, or 20 whatever, and I think that we should keep in mind -- pay very close 21 22 attention to the total cost of these trips, and to what difference 23 it will make in our decision-making. I think that John French made an excellent point, and Molly also, that spill prevention and 24 response is not in fact what this body is about, much as we are 25 interested in that. It isn't something we make decisions about, 26

and I also think that taking field trips to look at things that the 1 2 Trustee Council have already spent money on where the decisions have already been made, would be interesting, but I don't think it's 3 an appropriate use of funds. I think the only appropriate use of 4 5 funds is, if we are going to make a major decision, or rather if the Trustees are going to make a major decision, we're going to 6 7 advise them, and it would help for us to go to a place, that is a legitimate reason to go. I think we should consider the option of 8 not having a field trip because maybe none of these cases really 9 10 would warrant that expense up front. I'd like to know -- I 11 appreciate what Dave Cobb has done on checking on -- on costs. It's not clear for me -- to me from this what the total costs of 12 13 this trip is and I think you should take a look at that and decide 14 whether it's warranted, as much as I'd like to do it.

MR. McCORKLE: Thank you, Pam. Other comments, please.
Kim and then Jim.

One of the things I think would be 17 MS. BENTON: helpful, and I'll just speak for myself is -- not being a scientist 18 19 and not being heavily involved in science, I know the last trip that we took out when we took a field trip and we actually got to 20 21 see what they did, where they did it, then when we make decisions some of these projects, most of these projects, somehow become real 22 23 because they're no longer just on paper, you were a little bit 24 involved, and if we could tailor the trips out to visit as many of 25 the sites, or as many of the projects that have been done out in 26 the field to give a sense of realism to the things that we've been

1 voting about and talking about on paper. I think that that would be very beneficial. I think what RCAC is doing is great. I'm not 2 real sure that that would help me -- affect my decision-making on 3 4 the project that we're supposed to be and the direction that we're supposed to be focusing on. But visiting some of the sites that 5 have been cleaned up, some of the mussel bed sites, seeing what 6 7 they're doing out in the water certainly would help a lot in making decisions. 8

MR. MCCORKLE: Thank you. Chip.

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I would just want to make it clear 10 MR. DENNERLEIN: that what I intended by my first remarks is that if -- was two 11 trip that а multiplexity of of 12 points, one, а was ___ 13 accomplishments, and that if that fell into the time of the drill, there would be a benefit to be out there and pass through the drill 14 15 and see a little bit of that at the same time. I -- I have the 16 same sensitivity to Pam -- that Pam does about just taking a junket, having been in Prince William Sound, in late September it 17 can be a junket -- it can be a ride, and it all depends on Mother 18 19 Nature. But, the -- I have found though in my work that -- that 20 I'll agree with Kim that seeing some things physically, really puts some things in perspective, and I can -- I can think of a number of 21 22 instances in my work in the park system where I've gone, and, you 23 know, even taken a couple of days off and taken my hike in the field, you know, and it's been fun, and I've seen a development, or 24 I've seen a resource problem, or I've seen something, you know, 25 26 through a different set of eyes in the Smokey Mountains that --

1 that told me exactly -- that's exactly what I needed to focus on in 2 Katmai or Denali. I think it makes some things very real, and if -- if we do vote on it, I will vote to combine as many aspects of 3 this program as we can. Maybe both seeing some things that have 4 been done, and some things that are proposed to be done, and come 5 6 back with sort of a real scope of what it is that's going on out in the Sound. I think that would help, and I would -- I will agree 7 8 with Chris Beck that the sooner the better, and maybe we don't go 9 to another trip in the spring, but get the PAG out as soon as 10 possible to see a broad sweep of what's going on, and I think that would help our deliberations for the maximum time that we sit on 11 12 this body.

MR. McCORKLE: Thank you very much. Jim

13

MR. KING: My former role on this committee, I spoke to the need for conservation of the money, so I will endorse what Pam said. However, as a public-at-large member, I feel I should point out that the public by in large has not been to these places in Prince William Sound, and I think it's very -- is a good idea for us to get out there and see what's going on and get a feel for things.

21 MR. McCORKLE: Thank you. I'd like us to be aware of our 22 time and agenda. We have a few more minutes we can spend to this, 23 so -- is anybody who has not spoken wish to make a comment on how 24 we might undertake these field trips, if at all. Gordon.

25 MR. ZERBETZ: I'm not really bringing it into a narrow 26 focus because my -- my druthers would be to see as many sites as

possible and to have an opportunity to view some of the projects 1 2 that have been accomplished, and also some of the sites where items are or projects are proposed. And, I would point out that I'm not 3 overly enamored with spending too many days on -- on a spill drill, 4 and, in fact, if that's the only reason that we are going to be 5 6 holding it during the questionable weather potential in September, 7 that we might be able to have it a little bit more favorable weather conditions at another time. 8

9 MR. McCORKLE: Thank you. Any other comments before we 10 pass on to the next -- John.

Well, just a real quick follow up on -- on 11 DR. FRENCH: 12 Chip's comment about -- that -- having another field trip in the 13 I think the reason we're -- we as a group proposed of the spring. 14 Kodiak trip in the spring was because, partly is -- as Chris said 15 -- it brings us to both those sites within an early part of the phase -- the term of the PAG, at least as early as possible. 16 Ι 17 mean that's still in the second year of the term, but if you wait 18 until the fall of the second term -- second year of the term, 19 you're kind way at the end where it's not going to have much impact 20 on anybody that doesn't stay on another term.

21 MR. McCORKLE: Thank you, very much. The way we will 22 make a decision on these topics is we'll present the report and 23 then we'll ask -- then we'll move onto our next agenda item and 24 later on when the quorum has arrived, we'll bring two items back 25 for vote. One will be voting on whether or not we wish to accept 26 one or the other of these options, or not, also, wish to have

another focus, and then the second one will be to discuss a motion 1 2 that I am to put before you with respect to item nine. But, I'd like to return to Dave who has two parts in his report, one of them 3 was to present to us an idea for ground rules or norms. You'll see 4 that the Public -- or the ad hoc group does not advise the 5 notations or selection of a gatekeeper, thinking that we have 6 enough gatekeepers already, if they would just do their job, but 7 that we may want to discuss norms. So for that purpose, I turn now 8 back to Dave to discuss paragraph two on his letter of April 17th. 9

10 MR. COBB: I just jotted down a few ground rules or 11 norms that I used in other groups, just for consideration, as a 12 starting point. As Vern has said, at our teleconference we felt 13 that the Chair and the Vice-Chair should be responsible for keeping 14 the meeting moving -- moving along on a reasonable basis, so if --15 I'll just put these out for discussion, consideration, or whatever.

16 MR. McCORKLE: Is there any discussion on the items one 17 through eight on paragraph two. If not, I'd like to thank you for 18 that report, Dave, because it shows some thought, and we can come 19 back and take those up -- John.

20 DR. FRENCH: They'll be open to bring it -- I will --21 a number have sat on public -- we've gone through this before in 22 the previous term, but I think it's important. We are a public 23 advisory group, I think it's valuable to our agenda to keep the 24 public comment in a position where we can actually react to it, 25 having heard things. And, for that reason, I would recommend we 26 try to have the public comment at the end of the first day of the

meeting, so we have the remaining day to act on it -- items brought 1 up during the public comment, if necessary, rather than sticking it 2 way at the end of the meeting.

3

MR. McCORKLE: Referring to the present agenda, 4 our 5 public comment is waiting -- awaits until tomorrow, so the 6 suggestion might be that we change that time, and when we finish this report, you might want to go back and modify the -- the 7 I don't think we can probably change this because it's agenda. 8 9 been published, and the people who are expecting to have public 10 access are really not planning to come until tomorrow, so we're 11 sort of locked into that, but those are good suggestions. Just by 12 putting this report to you, all we're doing is saying that the ad hoc committee did its work, and what the PAG wants to do with it is 13 up to its own direction. The finally point is item nine, and the 14 15 language that I've recommended we consider to deal with proxy 16 votes, would be something like this. The PAG business shall be 17 conducted by members voting in person, or in their absence, by the member approved alternate -- by the member's approved alternate. 18 19 And that says how we vote. It keeps everything positive, it 20 doesn't really say we're not going to do certain things, it says 21 this is how we vote, and that's the language I'd recommend we use, when we take this up for -- for voting. That really concludes the 22 23 report of Public Advisory ad hoc group. Kim -- any questions that 24 I'd like to defer to other members of that ad hoc group to say if there's anything that we covered that didn't show up in the report. 25 I -- very brief comments they might like to make, and then we'll 26

hear from Kim. There currently are no additional comments, so Kim, 1 2 what's your ... Just wondering on number seven, Sandra's MS. BENTON: 3 going to check on (indiscernible) communications through telephone 4 debt card, are we ... 5 MR. McCORKLE: Oh, by golly we forgot -- thank you for 6 bringing that up. I just leaped over that. Is there a report on 7 that? 8 (Aside comments) 9 I understood you did have some MR. MCCORKLE: Okay. 10 information on that though? Cherri is making her way to the 11 12 podium. I have checked into the debt card system, MS. WOMAC: 13 but my notes are upstairs at my desk. I'm sorry. 14 MR. McCORKLE: Can we bring it up a little later this 15 16 afternoon, perhaps. Yes, that will be fine. MS. WOMAC: 17 MR. McCORKLE: ... after lunch. Kim, would -- could I --18 we delegate you to remind us to bring that up again since I 19 overlooked it. I'd like to -- with your permission, ask for a five 20 minute recess. That means we would be back at this table at 11:00. 21 This recess is just for moments of immediate emergency, and not 22 necessarily to attend to extended business, so let's take five, 23 okay. We'll be right back then to go, to take up the collection 24 25 policy. 26 (Off Record 11:05 a.m.)

1

(On Record 11:10 a.m.)

2 MR. McCORKLE: Okay, folks, we're ready to go, we've been Before we turn to the immediate agenda, we want to plugged in. 3 make a quick distribution of a -- of a letter that's been 4 5 circulated by Pam earlier, but some of us have not received it, so Pam if you would circulate that letter, and maybe while you're 6 7 doing so, tell us what it's about, without going into it because we 8 only have a minute or two here, but it's important that we get this 9 so we can then take it up later today, or tomorrow, if we don't get to it today. 10 Pam.

11 MS. BRODIE: Thank you. I would like the PAG to consider whether to take a position opposing lease sale 149. Ι 12 sent out letters about this, but I only did it on the 15th, or 13 rather the 17th, so some of you haven't gotten them. 14 So, we're sending out copies again, and also I'm sending out a map of the 15 16 lease sale area which I didn't include before. I hope -- I don't 17 intend for this to be a major discussion since it wasn't a planned 18 agenda item. If it turns out to be real controversial, probably we 19 should just drop it, but if there is a general feeling supporting 20 it, I -- I hope we can do this. The idea of all of this -- this is some -- this sort of thing has not been considered by the Trustee 21 22 Council in the past because it doesn't involve spending restoration 23 funds from the settlement. Nonetheless, what the Trustees have 24 done with the settlement is to try to protect resources from 25 The whole basis of habitat acquisition is to further injury. 26 prevent further injuries, and this oil lease sale would be

increasing the risk, in fact, according to the federal government,
 it would be a certainty of further oil spills in the area that was
 already injured by the Exxon Valdez oil spill. So, I hope we can
 briefly discuss whether to take a position on this.

MR. McCORKLE: Thank you, very much. We'll take this up 5 once, I'll ask for another opportunity to amend the agenda, before 6 7 we taken the -- the (indiscernible) program, and at that time I'll 8 Kim to remind us and Pam to remind us to do things like -- to consider for -- in adding to the agenda. 9 Right now, the item 10 before us is the presentation on collection policies -- is Stan here? There's Stan -- okay, I have Stan Senner who is the Science 11 12 Coordinator and you now have the full -- given our complete attention. 13

14 DR. SENNER: Thank you, Mr. Chairman. I'm both an old 15 hand and a new hand in the oil spill program having been here with 16 the restoration planning group from 1990 through '92, and then 17 newly rejoined as the Science Coordinator for the Trustee Council The issue of collecting of scientific specimens can --18 staff. well, is always sensitive, and can be controversial, and especially 19 20 so in the context of an oil spill that injured some of the same 21 species that are now proposed for collection. Any collection of a bird that we -- so, a migratory bird requires both federal and 22 state permits, but when there is a proposal to collect specimens 23 24 using Exxon Valdez monies, approved by the Trustee Council, then that -- that's -- there's some exceptional sensitivity there, and 25 26 it's something that the Trustee Council, and I'm sure the PAG, want

to look at very carefully. Our Executive Director, Molly McCammon, 1 2 presented a draft review procedure to guide decisions about requests to collect specimens, and I believe you were forwarded a 3 copy of that review process a few days ago. You actually should 4 have gotten two sets of items on this, one was a draft collection 5 6 review process, and the second was a specific memo to the request by Dr. Marianne Bishop of the Forest Service to collect some birds 7 8 in relation to the project on avian predation on herring spawn. 9 The two -- we really have two issues here, one is sort of the -the broader review process or collection policy and secondly a 10 specific request to collect some birds for one of the projects. 11 Are you -- are you finding this in your packets? Okay, all right. 12 Talking about the review process first. We think this is pretty 13 14 straightforward, and that's certainly our intent, and in a nutshell 15 the idea is that a request will come in from a principal 16 investigator to collect specimens. This is a request that goes to 17 the Chief Scientist, Dr. Spies. Dr. Spies will review that 18 request, consult with outside peer review scientist, and consider 19 a series of questions that are outlined on this review process, and 20 I'll come back to those questions in just a moment. Following the review by the Chief Scientist, he is going to formulate a 21 22 recommendation which then goes to the Executive Director, and the 23 Executive Director will in turn pass this on to both the Trustee 24 Council and the PAG. You will get copies of these requests in a --25 well in advance of decisions. The final decision is to authorize 26 or not authorize the collection, and the idea is that you are to --

you're invited to ask questions or make comments on the, you know, 1 2 any concerns you may have, and the Trustee Council was invited to do the same, and then those are taken into account in any final 3 decision on the request. We're not looking for formal votes, so to 4 speak, on -- on an individual request to collect specimens, rather 5 we are looking to you to test the water, get feedback, raise 6 7 concerns, and if we all need to go back and do more homework before a decision can be made one way or the other, then we do that, 8 having had your advice and counsel. The -- I'm not going to go 9 10 through in detail questions or criteria for making a decision on 11 the collections, just to say that the bottom line is really do the proposed, do the advantages out weigh the 12 collections as disadvantages, will it actually lead to some restoration benefit 13 for the ecosystem or the species involved, and very crucially here, 14 15 will the collection result in any additional injury to the 16 population of -- of whatever species are involved. Many of these 17 same considerations are ones that are also taken into account by 18 both the state and federal governments as they act on a request to collect birds, or some other specimen. The additional element 19 20 here, though, is -- is this an appropriate use of Trustee money, 21 does it ultimately lead to the restoration of injured species or the ecosystem. So, that is just the process that's been proposed, 22 23 and then before I entertain any questions or comments on that, let 24 me just briefly then talk about how we have applied this in the first request that's come before us, and -- I'm sorry, Molly. 25

MR. McCAMMON: Real quickly here, I think we should

mention that this process was presented to the Trustee Council at
 their March 31st meeting, and they felt very comfortable with this,
 and thought it was very appropriate for their purposes.

We've had a couple of suggestions, or DR. SENNER: 4 actually one since then, to fine-tune some of the language in the 5 6 question proposed in the review process, but the process as been well received, and we invite additional 7 proposed has 8 suggestions from you and then we'll do a final version of it. So, let me just show you then, or talk about the request at hand, and 9 entertain questions on both the process and the specific request, 10 if you have them. Dr. Marianne Bishop of the U.S. Forest Service 11 in Cordova is the principal investigator on a project evaluating 12 the impact of avian predation on herring spawn, and this is a part 13 of the SEA ecosystem package, and the notion in a nutshell is that 14 if we're to accurately model and predict the -- and access the 15 spawning of herring and how that translates into returning herring 16 in future years, that we have to understand the effects of avian 17 predators, because there are lots and lots of glaucous winged gulls 18 and various shore birds and waterfowl that are really chowing down 19 20 on herring eggs, and if you're going to model what's happening to herring, that's something you have to take into account, you can't 21 just ignore it, and in order to do it effectively, there is need to 22 sacrifice some birds, find out really what is in their stomach 23 24 content, and access what level of take there is on those herring 25 eggs. It's also important to say, just flipping it around from the 26 bird's standpoint, this isn't just a matter of interest just from
the standpoint of herring that -- herring spawn is a very important 1 2 resource ecologically for a lot of migratory birds, so there is interest in this really both from the standpoint of the herring and 3 from the -- the importance to birds. The -- the request by Dr. 4 Bishop is to take 30 glaucous winged gulls, 20 mew (ph) gulls, 20 5 surf birds and 20 black turnstones, and surf birds and black 6 7 turnstones are both a shore bird species. In our judgment, the 8 impact on these -- population of these birds will be negligible by 9 the take of 30, in the case of glaucous winged, and 20 for each of 10 the other three species. We also feel that there really is no 11 effective alternative to sacrificing this number of birds to obtain 12 these -- these data. There's been discussion, well, can you pump out their stomachs, and various other, what we call, non-13 destructive sampling means. None of those in this situation are --14 15 are very practicable. We -- the recommendation from Dr. Spies is 16 favorable to the request by Dr. Bishop, and with the added caveat 17 that although her interest is in looking at what's in the stomach 18 of the bird, that the carcasses will be saved and made available to 19 the University of Alaska or Fish & Wildlife Service or to some 20 other appropriate body for other kinds of information that they can get from -- from the birds. In other words, if we're going to kill 21 22 some birds, let's get maximum benefit out of them for -- for 23 research purposes. I can also report to you that both the state 24 and the federal permits have been, not only applied for, but 25 granted to Dr. Bishop. So, let me just close by saying that we 26 anticipate -- well, not -- we don't anticipate, we have just

received a request also to collect 25 harlequin ducks as a part of 1 2 the nearshore vertebrate predator proposal, and we just received that Monday or Tuesday of this week. We ourselves have not barely 3 read the thing, and we do anticipate a very, very close review of 4 We feel we've given the one before you a close 5 that request. review, but we'll give the harlequin one an extra measure of 6 review, and you will be getting recommendation from the Executive 7 Director and Chief Scientist on that, and we intend to give it to 8 9 you in ample time to have a full discussion on that. I don't -- I 10 don't know that there's any value in having a detailed discussion 11 on the harlequin package since we, ourselves, have not even really 12 done our homework on that one yet. So, that's my presentation, Mr. Chairman, and I'd be happy to answer questions about the collection 13 policy, as well as Dr. Bishop's individual request. 14

MR. McCORKLE: Thank you, very much, Stan. Would the members of the group kindly address the questions directly to Stan, and I suppose Jim King may have a question.

Well, I don't have any problem with Dr. 18 MR. KING: 19 Bishop's proposal, looks fine to me. I like Dr. Spies' proposal that any remains after the first study is saved for additional use 20 21 by perhaps somebody at the university, and I wonder what -- in looking at the review process here you have seven questions that 22 23 you ask. I guess I would suggest maybe an eighth question is, are 24 the specimens fully utilized, or are arrangements made for others 25 to utilize the remains.

26

DR. SENNER: An excellent suggestion.

1 MR. KING: It's not too long since bird watchers used to shoot birds just so they could identify them, but I doubt that 2 3 . . . The Winchester field guide. 4 DR. SENNER: We've gotten away from that now, and I MR. KING: 5 6 think it's good, but still sometimes very specific investigation 7 that don't fully use -- utilize their specimens, and this should be an important thing to do. 8 DR. SENNER: I think that's an excellent suggestion. 9 Thank you, Jim. John. 10 MR. McCORKLE: Yes, specifically about the collection 11 DR. FRENCH: policy, how do you see the collection policy differing for other 12 13 types of animals, particularly marine mammals, if it comes to such, there's (indiscernible) lot more difficulties here. I would be 14 interested in seeing as broad -- broadly applicable collection 15 16 policy as possible to be adopted as policy for the all process. Do you see this policy being effective beyond avian? 17 With -- we cast this in terms of the DR. SENNER: 18 collection of both birds and mammals. I think it's fair to say

19 collection of both birds and mammals. I think it's fair to say 20 though that particularly the collection of any marine mammal on the 21 part of federal and agencies involved has even a more rigorous 22 review than they give birds. Our concern, I think, from a Trustee 23 standpoint is still to ask sort of the basic set of questions, but 24 recognizing that in the case of mammals there is a much more 25 rigorous government review.

MR. McCORKLE: Chip.

Yes, a couple of points, number one, 1 MR. DENNERLEIN: thanks to -- I'll give a disclosure. I had a chance to run into 2 our new science staff coordinator on the street this morning, and 3 so he scooped me one and Jim King scooped me on one. I -- I want 4 to second, but I want the record to show from our -- for myself and 5 our conservation seat here, one, I think the policy is very -- it's 6 very reasonable. It's a good approach. I read it over again last 7 I think that -- I like it adheres to the policy -- I like 8 night. the format of Dr. Spies' memo which says here were the questions 9 10 and here's my review of the policy. I think that discipline is -is important when you're using lethal collection methods on 11 12 wildlife in this day and age. I think it's good in the record. Number two, is I think Jim -- I would like to second Jim King's 13 eighth question, and I hope that we, as the Public Advisory Group, 14 though the Council, as Molly says as our Director, says it's very 15 16 comfortable with their policy. I think that they should be advised 17 that there's another piece of this, and I'll say, in this instance let me give you a very real world example, not only is -- are we 18 19 dealing with the fact that the university could use carcasses, but 20 depending on the way the carcasses are handled in some cases, they can, in fact, not be used for identification, but even to the end 21 result of mounting them for display. Last spring, I crawled out on 22 23 the end of the jetty at the Homer spit, and had 500 black turnstones land on top of my head, mixed in with surf birds. It's 24 25 a wonderful experience.

26

(Aside comments - laughter)

And, I mention that -- they're very MR. DENNERLEIN: 1 2 easy to collect at close range if you wanted to right in this bay. My point though is that the Fish and Wildlife Service is building 3 an interpretive center in Homer. Homer has a shore bird festival, 4 surf birds and turnstones are two of the primary species. 5 This is a direct example where both body weight composition science, as 6 well as even -- how -- depending on how soon the carcasses are 7 8 handled, interpretive displays could be of direct benefit to -- to 9 education in the spill area associated with ongoing activities and 10 agency programs. So, I strongly endorse question number eight. I have one other addition, and it's a little thing, but I think we 11 12 should always set an example. I would assume that we're going to 13 use non-toxic shots.

14DR. SENNER:By law, we're -- we're all going to use15steel shots.

16 it's not as easy as shore MR. DENNERLEIN: Okay, 17 birds, but they do make tracks (indiscernible) steel, as you know, so I just hope that we would do that. I think that's -- that's it 18 right now on this proposal, and I'll just say that I -- my question 19 then is, are we going to have an opportunity to see your review and 20 21 input into the harlequin ducks, which I think has some very real differences between this specific proposal and the subject of 22 harlequin ducks. 23

DR. SENNER: I'll -- just to say it clearly for the record, you will have that opportunity and you'll get it well in advance of when the collections are proposed, which I believe are August and September for the harlequin collections, and so, when is
 the next PAG meeting? (Aside comments) July, well you should have
 -- Art plans is to have a recommendation on that in a matter of a
 few weeks here, and so we can get that out by mail well in advance.

MR. DENNERLEIN: And I forgot, I did have one more 5 thing, thank you for mentioning, the only thing that bothered me 6 reading this proposal was sort of the one-way street. 7 I think the predation on herring spawn is important, but energy content, oil 8 9 content on high metabolic birds, shore bird migrations, that herring spawn and be very important, and right in the spill area we 10 have shore bird festivals in Cordova and in Homer. They're an 11 important part of local economy. These are resources of the Sound. 12 I think it would be appropriate to -- to acknowledge sort of a two-13 way street benefit of this proposal. 14 Thanks.

15

MR. McCORKLE: John.

16DR. FRENCH:My question is relating to science not to17the policy.

18 (Aside comments)

19 Okay, this question is probably more DR. FRENCH: 20 appropriately directed to Dr. Spies than to Stan. I have a problem 21 with the specifics of -- Marianne Bishop's proposal, and that is, how is she choosing to -- assure the random of the sampling, and if 22 23 she's not attempting to assure the random of the sampling, which, you know is dependent -- be directly related to the dietary impact, 24 which is what you're trying to measure in this project. How is --25 statistically, how is she trying to deal with -- this is a 26

representative cross section of those that are presumably eating
 herring spawn.

DR. SPIES: John, I haven't looked at that proposal for some time and I don't recall the details around this -- that are proposed and detailed project description. So, I couldn't give an answer to you now, but I could -- I don't know if Stan could add anything to that but ...

Only -- that's a difficult one because DR. SENNER: 8 part of the trick here to making this effective is to get up close 9 to a flock and look at you know the array of individuals that are 10 there, but then to pick several individuals that you're going to 11 actually to watch, so that you have your recording feeding rates 12 and the like, and then you go ahead and make the collection, and so 13 you have -- you have information on what that bird has been doing 14 in prior to the time you -- you collect it. So, it's not a -- you 15 are singling out individuals, it's not totally a random. However, 16 the trick is you are -- you're not, just for example, picking a 17 bird that you see eating herring eggs all the time, there has to be 18 a random element there. I don't recall that she's specified a 19 20 protocol.

DR. FRENCH: Oh, she does specify sampling from herring spawn areas which is what raised the red flag for me. She is not even proposing a random sampling to start with.

DR. SENNER: Well, okay, but the whole point of it, of course, is to -- to have an estimate of -- they're going to have the surveys of how many birds are on herring spawn, and then -- and 1 then a collection of individuals that are cleaning in a herring 2 spawn herring. What I was saying though was that, they can't just 3 pick the bird that they see only picking up eggs, as opposed to one 4 that's occasionally getting a lipid or a barnacle, or whatever it 5 is. That would -- that would totally bias it toward a very high 6 predation rate on herring spawn.

It's going to be difficult to -- to get, 7 DR. SPIES: 8 what you might call an unbiased total sample of the population 9 because she'll be focusing on these areas of herring spawn, and 10 then I suppose ideally one would want to shoot a representative of the major sections of the population, including those gulls and 11 12 other surf birds are not at the particular area at that time, it's 13 a little difficult. But, I think what the idea would be that one 14 would get an idea of the -- from the counts of birds, how many of 15 the population -- what proportion of the population is actually 16 feeding in that area, and then from those that are feeding in the 17 area, what proportion of their food is actually herring eggs and we -- we can well imagine that they are feeding on other things there 18 19 at the time, so that's kind of what their study is directed 20 towards, looking at those individuals that are in the area at the time, and I think it is not -- probably not too much problem in 21 22 backing out into the total population to look at what the total 23 population is getting in terms of energy content from the herring 24 eggs.

25 MR. McCORKLE: Before we go to Gordon, do you have a 26 follow up, John, on that? DR. FRENCH: No. I'm sure that Dr. Spies and peer review team are looking at this evaluation when -- I'm sure they will continue to do so, so I guess we can leave it in their able hands.

5 MR. McCORKLE: Well, we are left then to -- to fall back 6 on the scientific procedure and protocol that would dictate the way 7 this goes forward, which does take into account all those 8 perimeters, and so we trust that Dr. Spies will continue along 9 those lines. Gordon.

10 MR. ZERBETZ: Thank you, Mr. Chairman. I didn't -- I 11 did not have a scientific response. However, I am an amateur 12 birder, and I would respond from that ...

MR. McCORKLE: Oh dear, one of those.

13

14 MR. ZERBETZ: ... from that perspective, and I would say that I think this appears to be a sound policy and the proper 15 16 controls have been established. I can further ramble on, on 17 something that might be appropriate than the good of the order, but 18 I will very -- be very succinct in stating that as a grade school 19 student in the then territory of Alaska, I was a bounty hunter. We 20 had bounties on birds, at that time. Ravens and crows, I used to get twenty-five cents a pair for the claws, and the government also 21 22 paid us one dollar for the claws from -- are you ready for this --23 from the bald eagle, and I would just throw that out to show you 24 how attitudes have changes since that time.

DR. SENNER: Fact, I can add to that. I know that the federal government paid bounties on 30,000 eagles in the State of Alaska, and I don't know over what period of time, but it -- it was
 a very significant number.

MR. McCORKLE: We're trying very hard to stay on our schedule, we're a few minutes behind, and we're going to be. We began -- behind, ten minutes behind and we haven't caught up with them yet, but we do want to move on soon to Mr. Loeffler's program. Is there anything else that you'd like to talk to Stan Senner about? Any other questions?

MR. DENNERLEIN: Point of order, Mr. Chairman, is --9 10 is this the subject -- appropriate subject for a motion, that the PAG communicate to the Trustee Council the general endorsement of 11 the policy, with -- with the strong recommendation that an eighth 12 13 condition be added regarding the full utilization of any species collected for further, you know, 14 for further research and education? 15

16 It -- certainly. Would the -- except that MR. McCORKLE: we're -- rather than taking a vote, since we don't have a quorum, 17 18 what I have noted in my notes, to make the report for you, and I am assuming it would be consensus that the eighth question will be 19 20 added pursuant to Jim King's suggestion, and that arrangements be made for having specimen -- for saving specimen remains and the 21 22 other kinds of things will be reported in the minutes, and unless 23 there are any dissenting votes, we'll include that in our report.

24 MR. DENNERLEIN: I wouldn't dissent but on a policy 25 like collections, I would ask the Chairman to convey that in -- in 26 the notes and I will intend to bring it up as a formal action of the PAG. I think it merits -- this is a policy on the collection
 of species in the spill area, some of which may include injured
 resources, and I think it merits a motion from the group.

4 MR. McCORKLE: Thank you, very much. There will be time 5 for you to say that and bring forward the motion. John.

Vern, just as a procedure for this DR. FRENCH: 6 I don't foresee that we're going to get a quorum, 7 meeting. unfortunately, so I think maybe we should treat this as a work 8 session, and either Doug or somebody should take down a listing of 9 motions we would like to bring forward, such as the one that Chip 10 just came forward with, and we can bring them up as action items at 11 the next meeting when we do have a quorum. 12

MR. McCORKLE: Well, those will -- all of these
 DR. FRENCH: I'd say don't put them just in the
 minutes, but actually create a list of motions that we intend to
 act on at the next full session.

(Aside comments)

17

18 MR. MUTTER: Yeah, vote items, and we may have a quorum 19 yet. Martha is due in, but late, so, we may still get around to 20 those, but I am identifying those vote items.

21 MR. McCORKLE: All right, any further questions before we 22 move along on the agenda? If not, I'd like to thank you very much, 23 Stan for bringing us this information. Everybody is interested in 24 this activity and kind of activity. We now ask Bob Loeffler to 25 come forward, Director of Planning, and discuss with us the draft 26 restoration program and the 1996 work plan, and while we are a few minutes behind, I think we can go beyond noon to hear this report,
 and have a few questions as follows.

3 MR. LOEFFLER: I was -- hope you can all see this. Why 4 don't you give me just a second to set up here.

MR. McCORKLE: Okay, while you do that then, I'll -- I'd 5 like to suggest that we've got two or three things that we really 6 want to do that are sort of going to be left over business from the 7 morning session, so we've got a couple of options. We can --8 because we're a smaller group, we can take say like forty-five 9 minutes for lunch, and reconvene at 12:45 or 1:00, and address 10 those before we begin our afternoon program. Or, we can decide to 11 begin the afternoon program, and say like about 1:20 we would 12 reconvene at 1:00 and take up things such as the motion on proxy 13 voting and the voting on -- on field trips, which would be -- sort 14 of be consensus, have to come back for ratification later, or 15 become an action item for our next meeting, in the event that we 16 don't achieve a quorum. So, what's the wish of the group. Do you 17 want to try and get back at it a few minutes early, or shall we set 18 aside the beginning of the agenda at 1:00 to about 1:20. The 19 reason we need to decide that, so the staff has time to react, to 20 So, what's your -- what's your wish? Open forum, respond. 21 comments from anybody. If not, shall we start at 12:45, or start 22 up this early. 23

24DR. FRENCH:Lunch is coming in, right?25MR. McCORKLE:It will be brought in.We could munch and26lunch, if you ...

DR. FRENCH:Do people really feel they more than ahalf an hour to eat lunch?

MR. MCCORKLE: Although, I take it then the consensus is 3 to start a few minutes early. We'll start at 12:45, or -- we'll 4 How does that start forty-five minutes after lunch is served. 5 sound? And, we'll begin by putting all the things left over from 6 this morning before we begin the afternoon program. So, staff can 7 know that we'll try very hard to start the draft restoration 8 program continuation at 1:00, rather than a little later. Are we 9 10 ready? MR. LOEFFLER: I'm not quite ready, give me a second. 11 12 Okay. MR. McCORKLE: Mr. Loeffler may wish to announce some 13 additions to the family. 14 (Aside comments regarding Mr. Loeffler's fifteen day old baby 15 16 boy) MR. LOEFFLER: This is really the agenda for -- for the 17 rest of the afternoon, up through about -- up through 4:30, and

18 this is -- what I'd like to do is when we go over the draft 19 restoration program and the draft work plan, which is -- which was 20 conveyed to you last -- last meeting in the red book or the pink 21 book, or whatever color it is, and all of you should have it. 22 Dave, if you just want to hold up that book so that people can see 23 24 what we're doing. So, what I would like to do, first, I would like to go through what I think the mission in and sort of a schedule 25 through the summer, so that -- so that I know that what we're doing 26

is what you want us to do. And then, what we've done is scheduled 1 2 an in-depth look at -- the three ecosystem components of the restoration program, that is the SEA plan, sea bird/forage fish and 3 the nearshore vertebrate predators. And, we've invited a PI for 4 people representing those projects to give presentations, and I 5 6 might introduce them so you know who they are at this time, Dr. 7 Peter McRoy, University of Fairbanks, to represent the SEA plan; 8 Dave Duffy -- I'm sorry, I don't know if you're a doctor or not --9 he's been (indiscernible) for -- for sea bird forage fish; and Jim 10 Bodkin for nearshore vertebrate predators. They'll be the stars of 11 that episode of this show, so to speak. And, then what I'd like to 12 do -- then what I'd like to do is go over the program in general, that is the red book in general to see if you have a -- any 13 14 comments at this time. But -- so for the moment, let me just --15 I'd like to go over what I think as a discussion with you about the 16 mission for this part of really for review of the draft restoration 17 program. A mission that will take you through August, when it's -when the FY '96 work plan is approved by the Trustee Council. And, 18 19 that was in your packet, and it was also discussed a little bit last time, and that is to give scientifically informed public 20 21 review of the work plan. Now, I think that responds somewhat --22 some of the discussion I heard earlier this morning, that is, I 23 can't remember who, but someone said that what we really need to do 24 is not look at projects in detail, but look at the big picture, the 25 broad perspective. And, I think that Jim King seconded that a 26 little bit by saying we needed to look at policies, look at the

program pro-actively, and also it responds to what Chip said, with 1 2 respect to we need a little more -- we need to be the kind of people who have a little more information than just what you get at 3 a quick shot at a public meeting. We need to be the people who --4 we the PAG who think about it for awhile and understand it enough 5 That is, we're not do -- we're not 6 to give informed comments. asking you to duplicate the work of the -- of the Chief Scientist. 7 8 That is, that level of scientific review we have through an 9 independent scientific process. But, the public brings something 10 -- the informed public brings something else, and that is a sense of perspective, is this going in the right direction? 11 Are we spending too much money, are we missing things, and it is that 12 perspective that I think we want you to bring. 13 So, that is the mission that I think -- that I think we've asked you to do, and 14 15 hopefully it's consistent with your wishes. Now, before -- I'd 16 like some discussions like either, you know, I'd just go on, or --17 or no you've got it wrong, or something. But, I wanted two things, 18 the way I want to implement that mission, get you to review it is two-fold. One, is we've provided the program for the first time 19 really, in this red book, and in the summary of this red book that 20 you were sent, and this -- for the first time you can see the 21 22 program as a whole. So, I think we've put a lot of the information together for the work plan to let you say, okay, I see it. There 23 24 are things here that are out of sync that you're spending too much money on, too little money on, things you're missing, but this is 25 26 the information base we want to provide. So, we need to look at it

as a whole, but in a sort of Zen sense or something, we've threw in 1 the details just to completely mix (indiscernible), and that is in 2 order to understand the whole of the work plan, you have to look at 3 some of its parts. To understand how we're taking an ecosystem 4 5 perspective, you have to understand the ecosystem projects. And. so what we tried to do is two things, give you the whole picture, 6 and give you -- and get the scientists here so that they can --7 8 they can explain the important parts of this. Now, there's -that's too much to do in one session without OD-ing everybody, so 9 10 between now and August we'd like to get people here in waves, and 11 the first wave is the ecosystem projects. So, (indiscernible) this It's the right thing to do. 12 makes sense.

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 MR. McCORKLE: Do you want us to stand up and cheer or

 14
 wait for ...

Okay, let me go through the schedule then, 15 MR. LOEFFLER: and that involves, I'm going to take this off for a second 16 17 (microphone) because I'm going to pass something out. And, I believe we have enough for the audience as well, so, why don't you 18 19 take this one and pass it on. Okay, has it gone around? I see people looking at it. What I'd like to do is -- is walk through 20 21 our schedule through August, to make sure it works, and there are 22 three PAG meetings that we planned last time, with respect to the work plan. This one, one in April -- oh, actually, I have it on a 23 24 flip chart -- we have -- the three meetings are the one in April, one in June -- one in April, June and July, and so my version of 25 26 what -- of what to go over is that at this meeting we sort of

confirm the mission and schedule to make sure that we're on the 1 2 right tract. Review the restoration program, as a whole and review the ecosystem projects in particular. At your next meeting, there 3 -- what we will have actually is we'll be on our way to a draft 4 5 work plan, and you'll be able to get a second look at the program 6 as a whole, as it's shaping up, but then we'll review the fish and 7 the marine mammal projects, sort of the next wave. The third wave 8 being subsistence, archeology and other projects in July. And. I 9 know subsistence is very important, but I put it there for a reason, and the reason is, I think, that there are going to be a 10 lot of projects that come in May 1 that are going to need a little 11 12 time to develop. So, I think by putting that last, they will be 13 more mature and you'll be ready to look at them as a whole, because 14 I know there was some concern about the May 1 deadline. So, I 15 think by putting it last, it lets subsistence mature to where it 16 would be a better program by the time you see it. So, on the last -- on the last of these three meetings, I want to go back through 17 18 the draft program, back through this again after you've had a 19 chance to see all the component parts. So then -- so this will be 20 sort of a preliminary review and here -- and in July it will be --21 we've seen all the parts, now we can do a more detailed review. 22 So, that's the direction I'm going. What the rest of this -- I 23 want to go through this one more time, what the rest of the 24 schedule is how it fits into the staff work, so you know how the 25 PAG is fitting into the rest of -- rest of this adventure. On May 26 1 proposals are due for FY '96, that is proposals to implement this

1 draft restoration program, so in May, we're then going to be 2 reviewing proposals, the independent scientific review and the work force, Trustee Council staff will be looking at it all. 3 In -actually, we're not planning to send them all out to the PAG 4 because I suspect it will be roughly fifteen hundred pages, I think 5 it's probably just too much. We'll probably go to a summary later 6 The Chief Scientist -- after three weeks of no sleep, the 7 on. 8 Chief Scientist and the peer reviewers will get together to 9 coordinate their recommendations in the end of May, and in the following week in June, the work force, the Chief Scientist, and 10 11 what we did last year, which I think was effective, two representatives of the PAG get together to discuss projects, give 12 13 recommendations to the Executive Director for the draft work plan. 14 So, we get projects in, we're evaluating them, and recommendations. 15 the two people from the PAG are not there to give Now, 16 recommendations, it's not their personal recommendations, the PAG 17 won't have reviewed it, but it's more so they can convey to the PAG a sense of what's going on. So, at the end of this meeting, we'd 18 19 actually like for you to decide which of those two could be the 20 two. So, at that point we'll have a preliminary recommendation for 21 the draft work plan, so that's when the second meeting occurs, the 22 June meeting. We'll give you a preliminary review, we won't have 23 had much time, but then we'll look at some fish and marine mammal 24 projects, then the draft work plan is published, July is -- would 25 go out to the public, and while the public is reviewing it, then we 26 can take more time for you to give sort of this year's final

1 assessment of the overall program, and you'll have the last of the 2 projects. And, in August, we have your comments, the public 3 comments, the Executive Director makes her final recommendations, 4 it goes to the Trustee Council, and then those of us who have 5 worked on it through the spring. Okay. So, that's how -- that's 6 where we're going, and how I think we organized it for you to fit 7 in. Kim.

8 MS. BENTON: I -- I just had a question. One of the things that we've been talking about as a group at this last 9 meeting, and this -- today's meeting, is to move away from a 10 project line-by-line review, and looking at the schedule it's 11 really comprehensive, but it looks to me as if we're going to --12 13 instead of just taking two days like we did last year and squish through all the projects, we're taking six days, and we're really 14 going into detail. 15

MR. LOEFFLER: To some extent that's true, and I guess the way I think about it is the only way to think of the fish program as a whole is to give a cursory look at the details, but the reason we're looking at the details, so that you can see the program as a whole. So, I'm hoping that the emphasis is different this year, even if the parts are all -- are there, it sort of like the same paragraph ends on a different syllable.

23 MR. McCORKLE: If I could (indiscernible) too. First of 24 all this is really very helpful, and in keeping with the spirit, 25 the PAG would like to be able to look over more, but maybe pick 26 less, I think Kim's point is well taken, probably should be just

inserted at this time. But the way I see what you've done, and by 1 2 putting close review to this, you're moving in that direction, compared to what we used to have, so we really want to support that 3 idea, and I quess urge also that we -- we take this kind of 4 approach set forth here, and look over the -- the broad areas, in 5 more or less detail depending upon what the group is interested in 6 at that moment, but the point I think we'd like to stress is, we 7 might not be interested in a line-by-line, dollar-by-dollar, point-8 by-point blow of each program. We want to look at things more --9 10 more as you've organized it in the pink book or the red book, and particularly as you've laid them out here. 11

MS. McCAMMON: Mr. Chairman, in a way -- what's changed 12 for this year is the kinds of questions that you'll be asked about 13 14 these. Instead of just saying here's seven herring projects, what do you think about these seven herring projects> How it's being 15 16 presented to you this year -- this is our herring program, this is 17 how it fits in with Fish and Game herring program, this is approximately the kind of way or emphasis we're giving to the 18 19 herring program, does this make sense to you, if this -- do you 20 think it should be double this, less this, is this something that you've heard from various people that something is missing, or you 21 22 think it's inappropriate or whatever. So, the kind of questions I 23 think are going to be different, and how it's presented to you will 24 be more in a comprehensive kind of program, as opposed to just here 25 are seven projects and their costs and (indiscernible - coughing). 26 MR. McCORKLE: Thanks Molly, please go on.

MR. LOEFFLER: One way to -- I'm going to actually hop on 1 2 this point a little bit here. One way to think of that, you can think that the questions you ask are important to enforce that 3 perspective, and one way to think of that as we've outlined it in 4 -- in the red book for each of the programs, we put what our 5 objective of that program is, what we plan to accomplish in this, б 7 or what was accomplished in the past, and what our -- what we plan 8 to accomplish in the future. And so, that's not really been -we've not done it project-by-project, but we've done it sort of 9 10 accomplishment-by-accomplishment, and the cost. But, I think that it -- that in fairness to the people who are going to come, the 11 12 PI's, they're more versed in their projects, and so they're likely 13 to give you a project look at it, and I may be apologizing for them 14 in -- in advance, but I think that's an important way, as long as you keep in mind, that you're not really focusing on methodology or 15 those projects, but how does it fit into the program, and if your 16 17 questions reflect that, it will be a productive session. Okay. So, speaking of questions that reflect that, the next thing I -- we 18 did, is we thought of, if we were you, and in fact, we are in a 19 20 sense because we do evaluation as well, what questions should we 21 ask. And so, we -- I sent them -- we sent them to you -- my name's 22 on the top, but it was a collective -- a collective effort, to think about questions, and we did that for the program as a whole 23 24 and for individual projects and project groups. Notice we did -actually, so the question that I think is useful for you to keep in 25 26 mind are sort of -- does the -- does the program as a whole

1 investigate the correct problem? That is, are there things were 2 missing, are some things unrelated to restoration, you know, and does it reflect appropriate -- I mean, is this appropriate, is the 3 budget appropriate, is its allocated resources appropriate, that is 4 are you paying too much on fish and too little on things that we 5 6 don't manage, or spending too little on things that we manage, are we missing management needs. But, it's those are overall questions 7 8 I think it's important to keep in mind. The third question on this 9 -- that we thought of is financial sustainable, and that's -that's actually quite important, and it is very easy to start major 10 projects that you -- we can't finish, and we only have so much 11 so it's important for you to look at the financial 12 money, projection as a whole to see whether it tracks with what you want 13 to do for the long-term, up to and including restoration reserve. 14 15 So, I think the allocate resources, get the right problems, and 16 sort of is it financially sustainable are the three things we 17 thought of for the program as a whole. For individual project groups, for the fish program, or with herring program, it's useful 18 19 to see, if they're clearly defined objectives and end points; that 20 is, does this program end at some point, or is it just, you know, good for stuff that goes on, and that is when it ends is it 21 22 something that's worthwhile to accomplish. Will the project help 23 restore the service, or the resource, or be useful for restoration? 24 Another way to think of that is when you're telling you -- I've been thinking children, you know, I've been doing that -- when you 25 26 tell your children ten years from now this is what I did in the

restoration war, you want to say, did it leave a legacy. 1 Did 2 somebody care ten years afterwards? And, I think that's important to keep in mind when you look at these programs, you should be able 3 to say, you know, well, Henry, this is what I did, and you know, 4 5 you're out in Prince William Sound in a kayak and, you know, it's 6 important to you. So, it's important to keep in mind what -- leave 7 a legacy, and that's -- and the last it's cost effectiveness. Once 8 again, the money is -- actually there's two more, I'm sorry, cost effectiveness -- is the cost reasonable with respect to what we're 9 getting, and the final one is sort of an ad hoc addition. A lot of 10 what we do raise into things agencies do, and at some point an 11 agency should be doing it, but at some point, we really do augment 12 the management abilities, for example, or augment the work that 13 14 agencies -- that agencies wouldn't do. A good example for those of you were here last time, is some of the coded-wire tags that we 15 16 started would not have been done if it -- I think it would not have 17 been done if it hadn't been for the Trustee Council. In fact, had the effect of protecting the run -- the pink salmon runs in the 18 19 southwest district, and we're transitioning it to a permanent 20 funding source that's not a Trustee Council. But, those kinds of 21 questions are important for you to keep in mind, and normal agency 22 management is a big (indiscernible). So, think about it. It's 23 kind of easy to tell people to sort of what to think about, the 24 answers are harder than the questions. The last is, this is the 25 free form for it. Other things you think we should be thinking 26 about, we'd appreciate hearing it. So, the additional things to

consider is -- to the extent they're important for you to consider,
 they're probably important for us to consider, and so we'd sort of
 like to know.

MR. McCORKLE: Surely there will be some questions, you
know, it's -- enthusiastic and enlightening preliminary review.
Yes.

MS. SCHWANTES: These questions, I think, stem from our discussion this morning, as being a pro-active group, what in my mind I see happening or what I would like to see happen, is a list of programs with the budget, and then I would like the PAG to be able to sit down and prioritize. Is there a budget that the Trustee Council is going spend this year?

13 MR. LOEFFLER: I think the list -- the preliminary list 14 has not been adopted by the Trustee Council, gives -- gives this 15 book, and so that you can see the budget on pages -- overall on 16 pages 15 through 19.

MS. SCHWANTES: Okay, but do you have ...

MR. LOEFFLER: 15 through 22.

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19MS. SCHWANTES: ... specify the amount of money that the20Trustee Council has allocated for '96 or through a certain year.

21 MR. LOEFFLER: Let me -- I'm going to get to that in a 22 back-handed way, and I think that's -- if you turn to the back page 23 on -- of this tabloid. I think it's important -- Molly's worked 24 through this for -- I think it's useful to just quickly review 25 again. There is -- the whole program has \$900 million. Some 26 adjustments, and reimbursements have occurred, a few more

reimbursements are likely to occur. There's been a commitment to 1 2 habit protection, and the reserve, and the residual is the work So, the work plan is all of the things we do, other than 3 plan. habitat protection or reimbursements or the reserve. So, how much 4 money is available for the work plan? By subtraction, in -- we 5 6 have \$110 to \$137 million for the next seven years. That gives us something of a budget, that is, I believe, something in the \$17 to 7 \$19 million, \$20 million range, if it was evenly spread over twenty 8 years -- over seven years, sorry. Trustee Council has not at this 9 time decided if they are going to -- whether we keep it at \$17 to 10 \$20 and then drop down to the reserve, nor have they decided what 11 the profile is for the reserve, whether it's a permanent fund type, 12 \$5 to \$6 million a year or a lot. So, I think those questions are 13 I don't think the Trustee Council has done it, but I think 14 open. 15 that's what we're looking at.

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MS. SCHWANTES: Okay. From my ...

17 MS. McCAMMON: We'll try to that (indiscernible) something on that. I think actually in about a month I'll be able 18 19 to give you a more specific answer to that because what Bob said is 20 absolutely correct, but there is -- if all of the major land deals 21 that the Trustee Council has made offers on actually come to fruition and money starts changing hands on these land deals, we 22 23 start getting into cash flow considerations, and so how much is available in FY '96 is a very real issue because if we make these 24 25 very legal, binding contracts to expend large amounts of money on 26 habitat acquisition, that we -- X amount for the work plan, and

we'll have a better number for that in about a month.

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there very roughly.

MS. SCHWANTES: Okay. Just one last thing. What I would 2 like to see happen is a list of projects, not in great detail, you 3 know great length, because of the scientific review process is 4 going to be done, but what I would like to see us have a body of 5 information placed before this group, and then let us maybe sit 6 down and slash, cross, to prioritize and then make those 7 recommendations to the Council. That's what I would like to see. 8 In a very rough basis, it's in the pink 9 MS. McCAMMON: book right now. And, if you want to just use it as a -- it's in 10

MR. LOEFFLER: Also, in -- by the draft work plan, you'll
-- there are all the projects in excruciating detail (indiscernible
- simultaneous talking).

15 MR. SCHWANTES: I know we're going to have a number of 16 other projects coming in.

MR. LOEFFLER: But, I think also, I think those of you who were here last year may also want to have input as to exactly how this is done.

Thank you very much, Brenda. Are there 20 MR. McCORKLE: 21 any questions before Bob wraps it up? Bob will be back with us and his whole group after lunch, and it's going to be an exciting 22 afternoon. There will be a cast of thousands coming up and we will 23 24 be taking up some additional work before they come. It's -- it's kind of past noon now, let's try and make sure that we're back at 25 the table to start to work not later than five of one, and we'll 26

take up two or three things before we move on to the agenda. Those items will include proxy voting, field trip operations, discussions of the letter from Pam on the Sierra Club, and one or two other things. Chip.

And a global question here. Bob, on MR. DENNERLEIN: 5 this -- toward the end, archeological research and subsistence 6 proposals coming in, we have plus or minus question marked, five 7 In your mind, and this goes to Brenda's unknown projects. 8 question, do we have any ball park, side board numbers that you 9 would attach to fit in -- that you would reserve -- that you would 10 attach that you would say, we don't know, but if this was the 11 budget we've -- we've got -- we've reserved this over here ... 12

MR. LOEFFLER: I have two complimentary answers.

MR. DENNERLEIN: Great.

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MR. LOEFFLER: First is, none of these are commitments. 15 You should not look at the pink salmon -- budget for pink 16 Okay. salmon as a commitment, and I think that as projects come in, 17 you'll be working through them to try to play into the -- of the FY 18 '96 work plan, there will be these limits, but they're not now. 19 Not a binding commitment -- we'll re-access every year, but not 20 But with respect to archeology, in particular, I think 21 now. there's a significant issue out that we have not dealt with, and we 22 don't know what the answer is. 23

24 MR. McCORKLE: And, we'll deal with that after lunch. 25 The Chair must use its prerogative to call a recess otherwise we'll 26 talk on through because this is very interesting, but we must stop

now so we can get back and hit it right after lunch. So, we stand 1 2 recessed until five minutes of one, at which time we'll come back to Chip, and I know that Molly wants to have a word as well. We'll do that then, but we must stop now. Thank you very much.

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(Off Record 12:12 p.m.) (On Record 12:55 p.m.)

7 MR. McCORKLE: I think we have Thea Thomas in the room, which gives us a guorum. Hallelujah. We can -- we can do some 8 9 work. The meeting is back in order from its recess. The agenda is 10 slightly moderated, so that we can do some business remaining from 11 this morning before we go back into the afternoon program, which 12 will be a continued review of the program that began at 11:30 What I want to do is talk about proxy voting, field trip 13 today. options, I want to hear our report and recommendation from Pam and 14 15 the Sierra Club. We need to at least take note of these programs' necessity to talk about alternates, alternate members, and I quess 16 we can now have elections postponed from last time. 17 So, with respect to item nine, that comes to us back from the ad hoc group 18 19 that -- under consideration -- yes.

20 MR. TOTEMOFF: Yes, got a little information on Martha 21 Vlasoff. She is absent because her mother -- she had to go see her 22 mother in the hospital or something like that. She said she was supposed to be here at 1:00, but I'm not sure if she's going to 23 24 make it or not.

MR. McCORKLE: Well, that's why we should have put that 25 26 to the end, and I quess depending on what the group would like to

do, we can keep moving it along. We hoped that people might be 1 2 here by 1:00, but it is just 1:00 -- in fact, not quite, so we'll try and sort of make time for these things are going to include in 3 the -- in the agenda, and see if Martha can get here. We can put 4 As nice as it would be to have nominees that off, of course. 5 6 speak, they may -- they've already had their choice -- their chance -- to do that, and maybe others wish to speak on behalf of both 7 Martha and John who are the nominees, and you can still vote if you 8 wish, or we can wait until Martha arrives. It's up to how the 9 group would like to have that conducted. Item nine had to do with 10 proxy voting, and it was my job to bring some language to the group 11 to consider, and I'll read some language, and then you might want 12 to moderate it, and then there will -- needs to be a motion that we 13 would adopt, or not. The language I'm suggesting that we consider 14 15 on proxy voting is as follows: PAG meetings shall be conducted by members voting in person or, in their absence, by the members' duly 16 17 approved alternates. So, that gives us a chance to say that our business will be conducted by members of the PAG who are here in 18 19 person, and if the members are not here in person, their alternative, their approved alternate person would be the person to 20 vote. It also says, as is pointed out by members last time, that 21 if you don't have an alternate or your alternate is not here, your 22 23 group just does not get a vote. You have to be here to vote, to hear the discussion and participate in the business. So, there's 24 the language -- PAG business shall be conducted by members voting 25 26 in persons or, in their absence, by the members' duly approved

alternates. What's the pleasure of the group. Dave. 1

Mr. Chairman, I'd like to move that we 2 MR. COBB: accept the proposal as read. 3

MR. TOTEMOFF: Second.

5 MR. McCORKLE: It's been moved and seconded that we adopt 6 the following motion: PAG business shall be conducted by members 7 voting in person, or in their absence, by the member's duly approved alternate. Is there any discussion? There being none, is 8 the question called for? The question is then called, all in favor 10 of the motion say aye.

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PAG MEMBERS: Aye.

MR. McCORKLE: Opposed, no. The motion is adopted. 12 13 Second, field trip options. From this morning's discussion there were three or four points of view that we should be reminded of, 14 15 one is that maybe we don't take any trips at all. The second is 16 that we pack as many opportunities to see Trustee Council work done into a single trip as we possibly can, and then there is the 17 alternate that was presented by the ad hoc group. So, discussion 18 19 is open on field trip and the Chair will recognize Pam Brodie. Wouldn't you like to say something? You've been recognized, but 20 has been struck dumb. (Indiscernible) thank you. Comment, comment 21 22 please, on field trips.

> MR. DENNERLEIN: Ouestion

> > MR. McCORKLE: Yes, Chip.

25 MR. DENNERLEIN: Is this a -- are you requesting a motion? 26

MR. McCORKLE: I'm requesting comments first and then if
 you'd -- if anybody would like to make a motion, a motion is also
 in order.

4 MR. DENNERLEIN: I'll make a motion for purposes for discussion to -- that I would move that we ask the -- that the PAG 5 request the staff to try to develop as cost effective approach to 6 our option one, which would combine a fall trip with as many 7 opportunities as possible, including a visit as soon as possible to 8 Chenega, and that that decision and cost options be brought back to 9 -- to the PAG for -- for our final approval, and then -- then 10 request -- if -- if funding is needing request to the Trustees. 11

MR. McCORKLE: Is there a second to the motion?

MR. COBB: Second.

14 MR. McCORKLE: Motion's been moved and seconded.
15 Discussion, please. John.

DR. FRENCH: Well, just a point of clarification from the person who moved the motion, it seems like with the combination of the various locations and all that you wish to combine into there, aren't you really talking about option two rather than option one. Otherwise the language is fine.

21 MR. McCORKLE: The only option that was -- the only 22 location that was mentioned was Chenega, but I assumed you meant 23 the Valdez, and a trip about the river festival.

24 MR. DENNERLEIN: Yes, correct. I'll take that as a 25 friendly clarification.

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DR. FRENCH: Because option one has a specific Chenega

1 trip listed separately, which is why I was asking for2 clarification.

MR. McCORKLE: Molly.

Mr. Chairman, in the budget for the PAG 4 MS. McCAMMON: 5 for FY '95 there is funding, additional funding for a field trip, so this was anticipated last year, and it is within our funding, 6 7 and what I could suggest that we would do in the next month is 8 start laying out a schedule and putting some cost parameters to do that, keeping within the budget that the Council has already 9 10 adopted, and bring that back to you, circulate it and see if that meets with the members' approval. 11

12 MR. McCORKLE: Thank you. That sort of addresses your 13 question, did it not, or your motion, Chip?

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MR. DENNERLEIN: Yes.

MR. McCORKLE: Pam.

16 Since I didn't hear any support for my MS. BRODIE: 17 idea of not having a field trip, I think that this is a very good 18 idea what Chip is proposing, with one possible modification, and 19 that is regarding what Gordon Zerbetz said about considering the 20 fact that the fall we may be running into bad weather, and the fact that the spill drill was not much related to -- really, is not 21 22 related directly to what we do, maybe it would be better to have it 23 during the summer, even though we will miss the spill drill.

MR. MCCORKLE: Doug.

25 MR. MUTTER: The only problem with the summer trip is 26 if we're going to make an arrangement with Stan Stevens Charter or someone like that, that that's their busy time for real paying customers and we'd probably be -- have a better deal if we waited until after Labor Day.

MR. McCORKLE: John.

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Oh, there's Bob -- we already have June 5 DR. FRENCH: and July meetings scheduled, and as I understand from Bob's 6 7 presentation, we can expect those to be fairly full with 8 presentations and discussions that would be best facilitated in this room or one similarly set up to this room. I really don't 9 10 want to see a third summer meeting, if I can get away with it, at 11 least not before September, so I guess I would speak in favor of 12 going ahead, keeping the September date, even though the weather 13 may be getting a little bit less predictable at that time.

MR. McCORKLE: Doug -- Dave, pardon me.

15 MR. COBB: Mr. Chairman, I'd like -- the weather at 16 that particular time comes about ten days after the equinox and 17 traditionally it's been a pretty nice period of time in Prince 18 William Sound, certainly a -- we've made the mistake of having oil 19 spill drills on the week of the equinox and paid for it. So, I 20 think that -- this time period is about ten days after that, so it 21 should -- keep our fingers crossed, but the weather should be 22 fairly decent.

MR. McCORKLE: Is that the Valdez calm?

MR. COBB: Yes.

25 MR. McCORKLE: How about at Chenega, Chuck? How is the 26 weather there at that time, and how would our visit impact the

local people during that time? 1 2 MR. TOTEMOFF: Everything should be pretty much winded 3 down by them. You know, you shouldn't have a little bit of brisk air, but you definitely won't have snow, or anything by then. 4 5 MR. McCORKLE: Will there still be something that we can 6 see? MR. TOTEMOFF: 7 Sure. 8 MR. McCORKLE: Okay. I just want to be clear, were you talking 9 MR. BECK: about ten days after equinox, because it puts us out into early 10 October, is that what you're thinking, the first week of October? 11 12 MR. COBB: No, actually, I'm (indiscernible) the 19th to the 21st period is right on (indiscernible - simultaneous 13 14 talking) 15 MR. McCORKLE: The equinox falls within that period. MR. COBB: 16 I'll check that (indiscernible). 17 MR. BECK: A point of clarification. 18 MR. COBB: We moved our -- reformation to move the 19 spill drill ten days later because of we got hammered on the 20 equinox is a tradition then we should have picked the 21st. 21 MR. McCORKLE: Was the spill drill prior to this time 22 about the 10th or the 12th, and you moved it back to the 21st, which is the equinox, because that's when the calm falls. Is that 23 24 right? 25 (Indiscernible - out of range of microphone) 26 MR. McCORKLE: Well, that's what the meteorologist would

say. Now, I don't know if we can follow that or not, but
 (indiscernible) be calm. We're still in discussion on the -- looks
 like we're narrowing to an option one variation. Yes, Brenda.

MS. SCHWANTES: I probably could have told you earlier, but I sort of tend to agree with Pam, but at least some different options, possibly.

MR. McCORKLE: Do you have some you'd like to suggest? 7 MR. SCHWANTES: I actually don't. Actually, my idea of a 8 very worthwhile field trip would be some trip that we can do in 9 order to help facilitate making a better decision about the 10 proposals for the upcoming years. Whether that will be looking --11 picking out a few of these projects and see the sites, or meet the 12 people in the area, and then make a decision, you know, we can't 13 hit all of those areas. We could, maybe narrow it down to a few. 14

15 MR. McCORKLE: One of the things -- just by way of further commentary that is intriguing about the Chenega visit is 16 17 that -- not only does that get us to a point where some work has 18 been done, but it gets us to a place that supports and backs up a recommendation, one of the few major recommendations made by the 19 20 Public Advisory Group, and that is to hire and utilize local resources and labor wherever possible, and that -- it's been my 21 understanding has been done in the Chenega project. Of course, it 22 23 goes on without saying that the RCAC is doing their thing with the 24 local folks and others, but there are opportunities to view a couple of aspects of our work by the trip that's encompassed in the 25 26 present motion. Further discussion? Doug, do you think you could 1 | restate in a summarized form Chip's motion?

2 MR. MUTTER: Okay, the motion is that the PAG request 3 the staff to develop a cost effective fall -- around September 21st 4 -- trip, include a visit from Valdez to Chenega viewing as many 5 restoration activities as possible, and to bring cost options and 6 schedule options back to the PAG for a decision.

7 MR. McCORKLE: You left out the good weather? That's the 8 motion. If there's no further discussion, then I'd like to call 9 for a vote. Are you ready to vote? All in favor of the motion say 10 aye.

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PAG MEMBERS: Aye.

12 Opposed, no. And, the motion is carried. MR. MCCORKLE: 13 Hope that the people in residences from Valdez and Chenega will 14 carry the news that we'd like to visit at that time period in 15 September, pending the research done by the staff and the 16 possibility of all the other arrangements being made, including 17 paying for the trip. Thank you, very much for the vote. I now 18 turn to Pam, who has a sent a letter, but some people had not 19 received it yet, and she is here in person to address an issue that 20 she'd like us to consider. So, Pamela, the floor is yours.

MR. BECK: Can I?

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MR. McCORKLE: Oh yes, Chris.

23 MR. BECK: With your permission, a suggestion, that 24 it seems to me that this is a very important issue and one that 25 really gets at the heart of what our mission is with this group, I 26 wonder if -- if there's some way to put it into our afternoon's
agenda. 1 If I understand what -- about what you're trying to do with our agenda, part of effort is really to talk about the general 2 subject of, you know, per your questions on your handout, what are 3 we trying to do, how are we trying to do it? I wonder if jumping 4 into the issue that you want to raise, Pam, might make sense if it 5 6 was, you know, to follow that or what -- you know, part of what we 7 address when we answer Bob's questions. I wonder -- to really talk about your subject, I feel like we need to spend forty-five minutes 8 talking about what the role of this group is. Maybe I'm making it 9 10 more complicated than it needs to be, but that's the suggestion I 11 throw out for your consideration.

12 MR. MCCORKLE: Thank you for the suggestion, and we certainly can accommodate it. I, however, would like to at least 13 maybe limit our consideration of this for four or five minutes, and 14 then see how it might fit into the afternoon program, and if the 15 16 group thinks that it does, then we could that. I don't know how we 17 -- we're going to take a little break between each of the major elements in this afternoon's program, just for a stretch and 18 19 getting coffee, and so forth, so there will be times to come back and visit this without completely upsetting the presentation by the 20 group, but how would you feel if we just went ahead and just had a 21 22 brief presentation by Pam at this time, and then we can decide if 23 we want to take it up more substantively a little later. Is that 24 okay?

MR. BECK: No problem. MR. McCORKLE: Okay, Pam, it's your turn.

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MS. BRODIE: Thank you. The Trustee Council has heard 1 extensive public comment over the years supporting protection of 2 oil spill injured resources so that they can recover. 3 This is really the basis of the whole habitat acquisition and protection 4 program, is that resources which were injured in the oil spill 5 6 should be protected from further injury so that they can recover. 7 And, the Trustees have responded to that. They have purchased some 8 habitat, protected it and intend to do more. But, there's been a sort of assumption that the resources that are under federal 9 ownership would, at least, could be protected. As I recall, maybe 10 11 Molly can help me with this, in the early days when the Trustees 12 were figuring out what they could do, that -- that management of public resources -- different ways of managing public resources was 13 considered part of the appropriate things for the Trustee Council 14 15 to do, to manage public resources in a way that helps recovery, but it's sort of lost focus in the attention to the -- how the money 16 17 was going to be spent and that's -- would certainly be sensible, but we're now facing situations where public owned resources are 18 19 threatened by proposed public actions, and this is one of them. The oil spill area -- I didn't include this in the letter I sent 20 21 out, but I passed it around since -- a map, which shows you exactly where the oil lease sale is, it is right in the oil spill area. 22 The -- I have in my letter the list of -- of special areas that 23 24 either are inside or surround this lease sale, including five 25 natural wildlife refuges or national parks, large concentrations of 26 state designated critical habitat areas, the McNeil River state

wildlife sanctuary, world renown for its bears, Kachemak Bay, 1 recently designated an international shore bird reserve, Shelikoff 2 Strait, designated critical habitat -- threatened sea lion and 3 whose numbers are in very serious decline. The EIS for the lease 4 5 sale 149 says that the chances of an oil spill -- in the case of oil development, the chances of an oil spill are basically 100 6 7 The chances of a catastrophic oil spill are -- are very percent. high if the oil development is going on for a long period. I've, 8 9 unfortunately, lost my notes on that -- oh, here -- oh, it's the Alaska Oil Spill Commission says one Exxon Valdez-size spill will 10 11 occur every twenty-four and a half years in Cook Inlet, unless 12 Prince William Sound style prevention measures are implemented. 13 This is not the case now with the oil development that is occurring 14 in Cook Inlet. It does not have the prevention measures that we 15 have in Prince William Sound. There are very extreme tides in Cook Inlet, as many of you know, so it's a -- it's considered a much 16 17 more dangerous area for oil development than Prince William Sound, 18 and there are many groups which have opposed lease sale 149, United 19 Fishermen of Alaska, among them, and the National Park Service, and 20 a long list of environmental organizations. I would like to make 21 a motion that the Public Advisory Group recommend to the Trustee 22 Council that they oppose lease sale 149 in order to allow for 23 recovery of oil spill injured resources without further threats. 24 MR. McCORKLE: Is there a second to the motion? 25 MR. DENNERLEIN: I'll second it.

MR. McCORKLE: The motion has been seconded. Further

1 discussion, please. Chuck.

2 MR. TOTEMOFF: I notice on the second page there is some mention of Chugachmiut Environmental Protection Consortium. 3 You need to understand that, first of all, that is not the consortium 4 5 that the villages and Chugach region are -- have gotten together for -- for EVOS restoration activities. 6 It's a separate consortium. 7 But, there was some -- I'm -- I'm not too sure that the consortium has indeed supported opposition to oil lease sale 8 9 149. I do know that the consortium sent a letter to Ted Stevens' 10 office opposing ANWR, and that was sent out by mistake, and there's 11 a lot of back-tracking that we had to do on that, and this was 12 quite unfortunate, but, you know, it just wasn't the correct 13 information that was sent. Now, I don't have enough information to 14 know that the consortium, you know, it's got our name on there too 15 -- has indeed endorsed opposition to oil lease sale 149. 16 MR. McCORKLE: Your organization has voiced opposition? 17 MR. TOTEMOFF: I don't know. 18 MR. McCORKLE: Oh, you don't know. I see. 19 MR. TOTEMOFF: Yeah, because I do know the other instance

20 where a letter was sent from the consortium, it was by accident,21 opposing the opening of ANWR.

22 MR. McCORKLE: Are there any amplification you can make. 23 I'm a little confused, I guess, as to what you just told us. Are 24 you saying that some of the groups on the -- and I do not have a 25 copy, so I don't know what you are referring to, but some of the 26 groups that -- on there may not have been in opposition to 149?

Well, MR. TOTEMOFF: Ι do know that all of 1 the 2 organizations in the consortium has -- has since withdrawn that letter out to Ted Stevens, opposing to opening of ANWR. 3 So, I don't know if this opposition to oil lease sale 149 is still in 4 5 effect from the Chugachmiut consortium.

MR. McCORKLE: Thank you. Kim.

I quess I look at what we're here to do, 7 MS. BENTON: and I really believe we're not here to do spill prevention and 8 response. That's not what we're here to do today. There are a lot 9 10 of public forums that are available to participate and comment on public land management issues, just like this one specific to oil 11 12 leases and timber harvest. If there are people that are members of this group, or members of our principal interest group that have a 13 14 high decree of interest in this project, there are forums available for them to express their views. The environmental community has 15 16 done a very good job of that. I think we're still working very 17 hard on defining that jobs that we're supposed to be doing here regarding the EVOS funds and how they're spent for restoration. 18 Broadening this to have us make comment and learn the background 19 and get up to speed and become qualified enough to make decisions 20 21 and recommendations as a body specific to land management issues, I don't think that's what we are here to do today, and I will be 22 23 voting against this motion.

24 MR. McCORKLE: Thank you, Kim. Other comments, please. 25 Chip.

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MR. DENNERLEIN: Obviously, I'm speaking as another

conservation representative, but I think this does go, and I'm 1 2 speaking, on two points which I think this particular sale, and the general issue does go to our pro-active mission. 3 First of all, we're going to review a program all afternoon to even find out what 4 the status of recovering resources is, and I think that it is -- it 5 is appropriate to consider that, without even waiting a decade and 6 before the offenders have finished paying the bills, we are moving 7 forward to lease in the spill area with a 100 percent certainty of 8 a spill, and a -- an assurance of a catastrophic spill, if 9 10 development goes on for a long period of time. That's not to say we would never even make that calculated risk. I have to say I am 11 12 certainly put off by the fact that we make that decision to lease 13 before we have even determined the status of recovery of some of 14 the resources and we're unable to even wait a decade for some of our science or restoration. So, I will support this for that 15 reason alone, not because I don't support oil and gas development, 16 17 simply because I think -- I think it's just inappropriate on the 18 scale of a worldwide disaster that we can't wait a decade to even learn our research before we go back into the spill area and lease 19 20 I think that does go to the heart of the public's concern land. 21 about this. Secondly, I think it raises an issue which I think is 22 definitely in our purview, and which I would want to bring forward, 23 that is that -- that when there are not only oil and geese -- oil and gas lease sale issues such as this, but commodities resource 24 action, timber harvest, being contemplated on lands owned by public 25 agencies in the spill area, we have gone through an extensive 26

1 process to analyze the habitat values of -- of privately owned 2 lands, to spend vast amounts of public money potentially to acquire these, and I think it's reasonable that we ask the members of the 3 Trustee Council that their own membership agencies perform some of 4 5 that same kind of review on any proposed commodity resource 6 activities within the spill area. I think it is -- and I'll finish my speech, but I think we're sitting here, I'm going to sit here 7 for two years on this Council, while we try to spend millions of 8 9 dollars to make new habitat channels, and the State is eliminating 10 its habitat division. While we wait for May 1 for subsistence proposals, and in a few weeks there will be 13 people left, maybe, 11 12 in the State of Alaska, out of a division of 30 people or so, that will even deal with subsistence. You know, I -- I didn't come here 13 14 to do fiction or just recreation, and I do think in the constituency that I represent, I might not be able to advise the 15 16 Trustee Council to fix the state budget, but I think my constituency does expect me to ask that, to at least review their 17 18 own agencies' proposed commodity resource action in the spill area 19 to the same extent we're analyzing, and to some extent even acquire 20 and preventing other kind of commodity resource actions on private lands. 21

22 MR. McCORKLE: Such eloquence. Thank you very much. 23 Yes, Tom -- Chuck, I'm sorry. I'm not getting names at all right 24 today, (indiscernible)

25 MR. TOTEMOFF: Some further clarification on the Chugach 26 Environmental Protection Consortium, we are having a meeting next 1 week on that, and I already know that whether opposing ANWR 2 (indiscernible) is already withdrawn, and this sort of jogged my 3 memory now, I have read something about this, and I think that's 4 going to be one of the agenda items there to be seriously 5 reconsidered at the meeting next week.

6 MR. McCORKLE: Are you saying then that your group may 7 have linked ANWR and this 149, there may be a link there?

8 MR. TOTEMOFF: No, what I'm saying is I think it's two 9 different issues. The consortium has already withdrawn their 10 opposition to opening ANWR, and I think they're going to be 11 withdrawing their opposition to this particular oil lease sale.

12MR. McCORKLE: I see. Thank you for that clarification.13Are there some other comments? Yes, Dave.

MR. COBB: I agree with Pam and what Chip have said, but I also agree with Kim, in a sense that I think as this proposal is worded now, it's -- we're not in focus, it's out of our preview. If it was worded differently, with a request of the Trustees look at their agencies and the responsibilities of their agencies, and I think I could support it, and I think the way it's read right now, I don't think I can support it.

21 MR. McCORKLE: Does language come to mind that would make 22 it possible for you to support or do you need more time?

23 MR. COBB: I think I need more time. This is the 24 first time I've seen this. I'm not really, you know, do not feel 25 comfortable the way it's worded now.

MR. McCORKLE: Thank you.

MR. ZERBETZ: Mr. Chairman.

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MR. McCORKLE: Yes, Mr. Zerbetz.

MR. ZERBETZ: I've had Pam's letters for about two days 3 now -- the mail works out my way, and I've spent considerable time 4 studying the items that she mentions in there. 5 I did a little research on the court documents that put us into existence, among 6 other things, and also the Charter for the PAG, and did quite a bit 7 of sole searching on it, and I am inclined to concur with Kim's 8 9 statement -- statements that essentially say this is not within our 10 purview.

MR. McCORKLE: Thank you. Any other comments? John.

12 DR. FRENCH: I'm reluctant to vote on an issue as critical as use of federal management tools on a very short notice. 13 14 I wasn't aware that this -- going to be on the agenda. I do think it's very important that we encourage state and federal agencies to 15 16 effectively utilize those management tools at their disposal to 17 assist the desired outcomes of restoration. I think that's a very good and objective place for us to be trying to go. 18 On this particular one, I think it's an important issue, I think we took 19 20 this stand -- if we took any stand on this actually, I think it 21 would be a fairly important position for the PAG to take, either pro or con, and I'm certainly not opposed to all offshore oil and 22 23 gas development. However, I do think the MMS process is very flawed and I think it is reflected in lease sale 149. 24 It is 25 extremely flawed. They tried -- there's a tri-borough resolution 26 that's out there from Kodiak Island Borough, Kenai Borough and

(indiscernible) Borough, that basically lays out three points, one 1 2 of which is related to future mitigation and minimization of the likelihood of spills, the other is dealing with oil and gas 3 development, fishing complex, and the third is money and is 4 capitalistic -- it doesn't relate to Pam's issue. But, the fact is 5 that all three of those boroughs felt strongly enough about these 6 7 to withhold support of a lease sale, until they had gotten positive 8 action on that. MMS's position is not to deal with those until 9 after the lease sale takes place, which I feel is a very misguided 10 process. I think we need, in terms of protecting our resources to prevent that, and I think we need to go forward in such a way to do 11 12. so. So, that aside, my personal opposition to lease sale 149, I really can't support voting on this resolution here in the PAG 13 14 meeting this afternoon. 15 Thank you. We will take the vote in one MR. MCCORKLE:

16 minute, and out of courtesy to the maker of the motion, I'd like to 17 offer you the chance for a one minute rebuttal.

18DR. FRENCH:Go ahead, because I'm going to move to19table, and if I do you can't rebut.

20 MR. McCORKLE: Well, you're not recognized, just yet. 21 Pamela.

22 MR. BRODIE: I think there were some other people who 23 wanted to speak.

MR. McCORKLE: Okay, Chris.

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25 MR. BECK: I personally don't think I'd be able to 26 vote on this. I think it's an important enough issue that it

merits more consideration, and I think before I could imagine 1 2 voting on it, I'd want to have a discussion I referenced earlier, which is to try to better define the role of this group. 3 I agree with Chip's earlier comments very strongly. I think that a line 4 has been crossed, and we have not acknowledged it, and that line is 5 that the Exxon Valdez restoration process is no longer simply that 6 7 restoration, it's (indiscernible) into some specific action, land 8 acquisition dealing with forestry and -- and certain types of research, and I think once we cross that line, it's necessary to 9 lean back and say well, if we're really taking on things a step or 10 two removed from strictly restoration, that in that context we've 11 open the door legitimately to address things like the one that Pam 12 brings up, and to other issues, and I don't think it would be 13 responsible to jump in and almost as arbitrarily say, well, yes or 14 15 no to oil or to forestry without, in my view, really trying to redefine a difficult task -- maybe it's naive to suggest that we 16 17 try in this group, this afternoon, to redefine the objectives of the EVOS process. But, I see that it's already, the door -- the 18 genie is out of the box, and we need to have a discussion about how 19 20 we best accept public land management. My own view is that we probably do it once the information, the dissemination really --21 easily applied information and directly voicing an opinion on these 22 actions, but I feel like this is a reasonable thing to throwing it 23 24 out. I personally don't have enough information to make an opinion 25 on it here today.

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MR. McCORKLE: Thank you. Pamela, you have the floor.

Pam.

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I was just yielding. 2 MS. THOMAS: Pam is yielding to you all. 3 MR. McCORKLE: MS. THOMAS: I'm just going to take this time, rather 4 know that United Cook Inlet Drifters 5 divided on this. Ι 6 Association campaigned long and hard against lease sale 79, which was the state lease sale, and I can only image that they are 7 adamantly opposed to lease sale 149. But, at this point, I would 8 9 have to agree with Kim that I'm not sure it's within the authority 10 or the responsibility of this group to make a recommendation of I think -- I'm just not sure, so ... 11 that type. 12 MR. McCORKLE: Thank you. Pam. MS. BRODIE: I'd like to see if Molly has something to 13 14 say about whether this. 15 MR. McCORKLE: Are you going to be put on the griddle? 16 Well, I guess I wanted to make two MS. McCAMMON: 17 comments about this. First of all, I wanted to clarify something, 18 Pam, that you'd said at the beginning about the Trustee Council 19 having taken action on management issues in the past, and to my --20 it's my understanding, and I haven't been here through the whole 21 process, so, I'm subject and very open to correction on this, but it's my understanding that when they have looked at agencies' 22 23 management action, it's been primarily in the area of harvest 24 levels, and these are harvest levels that are determined by the 25 State Board of Fish and Board of Game, or through the North Pacific 26 Management Council, or something outside of their realm as Trustee

agencies. And, certainly in terms of the actions on pink salmon in 1 Prince William Sound, they have questioned hatchery production, 2 they have questioned sports hunting of harlequin ducks, these are 3 the kinds of issues that they've focused on. I don't believe that 4 have gotten, sort of strayed from that -- from that level. 5 Certainly, they have never taken a position on oil development in 6 Prince William Sound or outside of Prince William Sound. They have 7 not taken a position on timber harvest in Prince William Sound or 8 outside of Prince William Sound. I think it is unlikely that they 9 would, at this point, take a position as a Trustee Council, other 10 than their position as Department of Fish and Game, Department of 11 Environmental Conservation, U.S. Forest Service, or whatever. 12

MR. McCORKLE: Thank you. John French.

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DR. FRENCH: Mr. Chairman, can I move -- I'd like to move we table this motion until -- well, until the agenda for our next meeting, which I believe is the June meeting. I'll leave it up to the Chair and the Executive Director as to the exact position on the agenda.

MR. McCORKLE: Is there a second? I'll call again for a second. If not, the motion dies for lack of a second, and the motion before us is the one I'm going to ask to have read again, unless Pam wants to have your final minute.

MS. BRODIE: I think that what Molly says is very well put, very accurate. My motion does go beyond what the Trustee Council and this group have done so far. I do, however, think that it's completely logical and rational for us to make this next step,

and that it is in fact not logical or rational for the government 1 to go ahead with this lease sale, if in fact they are trying to 2 restore the oil spill interest area. 3 MR. MCCORKLE: Thank you. Could we have the motion, as 4 5 you have it Doug. I have that the PAG recommends to the MR. MUTTER: 6 Trustee Council that they oppose lease sale 149 to allow for 7 recovery of oil spill-affected resources. 8 I now call the question. All in favor of MR. McCORKLE: 9 10 the motion as just stated, please say aye. PAG MEMBERS: Aye. 11 MR. MCCORKLE: And, the opposed, no. 12 UNIDENTIFIED PAG MEMBERS: No. 13 Can we do a hand -- the roll call. MR. MUTTER: 14 MR. McCORKLE: The Chair will declare -- division of the 15 house has been called. Very well, the roll call ... 16 DR. FRENCH: Isn't abstain one of the options? 17 Yes, that's an option. MR. MUTTER: 18 Rupert Andrews. (No response - absent) MR. MUTTER: 19 MR. ANDREWS: Yes. 20 Chris Beck. MR. MUTTER: 21 Abstain. MR. BECK: 22 Karl Becker. (No response - absent). Kim 23 MR. MUTTER: Benton. 24 MS. BENTON: Against. 25 Pam Brodie. MR. MUTTER: 26

MS. BRODIE: For. 1 MR. MUTTER: Dave Cobb. 2 MR. COBB: Against. 3 MR. MUTTER: Chip Dennerlein. 4 For. MR. DENNERLEIN: 5 Jim Diehl. (No response - absent). John MR. MUTTER: 6 French. 7 Abstain. DR. FRENCH: 8 MR. MUTTER: Jim King. 9 MR. KING: Abstain. 10 (No response - absent). MR. MUTTER: Nancy Lethcoe. 11 Vern McCorkle. 12 MR. McCORKLE: Abstain. 13 Brenda Schwantes. MR. MUTTER: 14 MS. SCHWANTES: Abstain. 15 Thea Thomas MR. MUTTER: 16 Abstain. MS. THOMAS: 17 Charles Totemoff. 18 MR. MUTTER: MR. TOTEMOFF: No. 19 Martha Vlasoff. (No response - absent). MR. MUTTER: 20 Gordon Zerbetz. 21 22 MR. ZERBETZ: No. Two yes, four no, six abstentions. MR. MUTTER: 23 Well, it failed, the vote fails. It MR. McCORKLE: 24 doesn't mean it can't be brought up again, Pam, so good luck to you 25 for doing that. We're just a few minutes behind. We've only got 26

a couple of other things to do. One, is to -- just to remind you 1 that the alternate member, for those of you who are going to name 2 one, should happen almost immediately. The deadline was a few days 3 ago, but I suspect if you get the paperwork in the next couple of 4 days, Cherri and the staff can probably work on it. For those of 5 you who some from distance, and might have either a vocational 6 problems, if you know you've got to attend to business at home and 7 can't get to a meeting, or you're deterred by weather, it's 8 important to have an alternate -- an alternate vote. So, I 9 encourage you to give that serious consideration. We try to get 10 alternate designations moved through in sort of a block so that --11 so that the Council doesn't have to, you know, deal on one every 12 month or so. So, could we have another -- what -- to the end of 13 the month, or what could we have to get it in? 14

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MR. McCAMMON: (Nods head).

MR. McCORKLE: So, the end of the month is our deadline folks for this first run through, and it may be some time before that door opens again, so please get -- get your alternates name to us. Brenda.

MS. SCHWANTES: The motion that was brought before the Trustee Council, as I remember it being posed, implies that the entire PAG presented the motions to the Trustee Council, and maybe so we don't have to go back and change the wording, I think the motion was presented by -- by Pam, and not the entire PAG. If that's what I heard in the motion.

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MR. McCORKLE: Doug, do you have a response?

The way we do it is identify who made the 1 MR. MUTTER: 2 motion, who seconded the motion and then what the motion is, and then what the vote is, and in this case, I have a record of who 3 voted for what and that will go in the meeting summary. 4 MR. McCORKLE: Will that address your interest? 5 MS. SCHWANTES: The motion was worded -- can you please 6 read that -- how the motion was worded. 7 8 MR. MUTTER: The motion is that the PAG recommends to the Trustee Council that they oppose lease sale 149 to allow for 9 10 recovery of oil spill affected resources. MS. SCHWANTES: Okay. 11 12 MR. McCORKLE: That was four nos, two yeas, and a whole 13 bunch of abstentions that don't count. MS. SCHWANTES: All right, I would make a move that we 14 15 (indiscernible - out of range of microphone). 16 MR. McCORKLE: (Indiscernible) identify who made the 17 motion. MS. SCHWANTES: Right. 18 19 MR. McCORKLE: And, also, it might be stated -- I need to 20 be corrected on this, but we have verbatim minutes of this meeting 21 too, don't we? (Aside answer) Yes, so -- and I don't know that those are -- they're not sent out to the whole world because 22 23 they're big, but the Trustee Council is -- does have access to 24 them, and from time to time on votes that are important, I'm certain this might be one of those votes, they would probably read 25 the transcript pretty closely. There was another question over 26

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here, yes, Doug.

2 MR. COBB: Mr. Chairman, on the submission of our 3 alternates name, what form do you want that in? The same thing 4 that was submitted -- same type of a package -- the same procedure.

There was a package that was sent to 5 MR. MCCORKLE: everybody, but if you have mislaid yours, or it didn't come, I'm 6 sure we could get you a copy before you go tomorrow. Maybe that 7 would be a good idea for staff to have two or three packages down 8 It's essentially the same here for folks that don't have one. 9 process that you went through. And, I do apologize to folks whose 10 names I've -- I've been doing pretty good this morning, but I 11 ruined my record this afternoon. Now, the other thing we need to 12 consider, we did move to have our election postponed until 1:00. 13 We're a little past that. Do you want to continue the elections, 14 or do you want to postpone them, do you want to move them to the 15 16 next meeting, what's your pleasure? Kim.

MS. BENTON: I just have a question.

MR. McCORKLE: Oh, pardon me. We just have a note here.
MS. McCAMMON: Martha will be on her way shortly, so she
should be here within the next half an hour.

MR. McCORKLE: Yes, Kim.

MS. BENTON: If she's going to be here, it probably will cover it, has anybody even had an opportunity to ask her if she would be willing to serve as Vice-Chair?

25 MR. McCORKLE: She was here to receive the nomination in 26 person, was she not?

UNIDENTIFIED VOICE: No.

2 MR. McCORKLE: Oh, that's right, she did leave early. We 3 probably (indiscernible). So, that's taking care of that. Yes, 4 Doug.

5 MR. MUTTER: I just have a question while you're 6 cleaning up vote items. Did the PAG want to take action on the set 7 of norms? The set of norms that Dave Cobb did and the -- the 8 collection policy. We had a motion that Chip made on endorsement 9 of the policy with the addition of the eighth question on full 10 utilization of specimens. We've got those two items.

MR. McCORKLE: I didn't realize that we were going to -that the collection policy was an action item, I thought it was for
information.

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DR. FRENCH: A motion was made.

15 || (Aside comments)

16 MR. McCORKLE: Correct, that's what it was, wasn't it.
17 Who -- who was the maker of the motion?

Chip Dennerlein made the motion, and Jim 18 MR. MUTTER: 19 King seconded it. The motion -- do you want me to read the motion? MR. McCORKLE: No, I just failed to write down that there 20 was a motion taken on that, and I had stated earlier that I would 21 22 include in our report question number eight, but that probably 23 isn't the proper way to do this now that we had -- had actually moved to accept that policy. So, would you like to tell us again 24 what you're bringing up? 25

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MR. MUTTER: Okay, so the motion on the floor is ...

MR. McCORKLE: Was on the floor.

2 MR. MUTTER: ... was on the floor, general endorsement 3 of the collection policy with the addition of an eighth question 4 regarding the full utilization of specimen.

5 MR. McCORKLE: So, I would suggest then that since that 6 -- that came from -- Jim did -- that was your suggestion was it 7 not, or was it Chip's? Okay, maybe you ought to then go ahead and 8 move that we add protocol number eight to that.

9 MR. DENNERLEIN: I would move that -- bring back to 10 the floor -- move the motion as stated by Doug, the PAG endorse the 11 -- express to the Trustee Council their endorsement of the 12 collection policy with an addition of number eight, that the policy 13 include a question and assessment regarding full utilization of any 14 -- individuals collected.

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MR. KING: Second.

MR. McCORKLE: It's been moved and seconded that number eight be added to the list as you heard outlined by Chip. Is there any further discussions?

MR. McCORKLE: Second to the motion?

20 DR. FRENCH: Question.

21 MR. McCORKLE: Question called. All in favor say aye.
22 PAG MEMBERS: Aye.

23 MR. McCORKLE: No. (No response). The motion is 24 carried, and item eight will be added. Now, I think, we're ready 25 to move on with the continuation of this morning's presentation. 26 Mr. Loeffler.

1 MR. LOEFFLER: Okay. At this point, where we are is to take a look at the ecosystem projects briefly, or actually as long 2 as you need to, and then go into a discussion of the draft 3 restoration program. So, I'm going to introduce Bob -- Bob Spies 4 who is going to give you a little bit of the history of the 5 6 ecosystem project, sort of an introduction to all three, and 7 hopefully that will be in the five minute version (indiscernible laughter), and then we're going to ask (aside comment - laughter) 8 -- that's the right answer -- and then, we're going to ask Dr. 9 10 McRoy to start on the SEA plan.

Just a little bit of DR. SPIES: Thank you, Bob. 11 12 historical context here for the scientific program. Some of you are aware, perhaps others not as much. We had a spill in '89. 13 The immediate scientific needs were in the areas of response and 14 15 protecting habitat, and then we started the phase soon thereafter, 16 of damage assessment. And, although all of us were concerned with the effects of the spill and the ecosystem as a whole, trying to 17 18 study the system as a whole, as opposed to separate species, is a very -- very challenging undertaking given the state of our science 19 about how ecosystems function, and therefore, it was the opinion of 20 most of the scientists involved that we would have to more or less 21 22 take a species-by-species analysis, at least for the large things 23 like sea otters and birds, and so forth, and that the study of the 24 more overarching ecosystem damages was perhaps not possible. We 25 could do that to some extent within the studies like the copal 26 habitat, where we looked at the whole intertidal system. You can

argue whether it's an ecosystem or community, but any how we're 1 2 able to do that to some extent. And, then as the -- as the scientific program progressed into the areas of looking at the 3 4 recovery from the initial damage, it made sense, of course, to 5 continue to look at these separate species, and in some cases habitat to see how recovery was progressing in the system. But, we 6 became increasingly impatient with the -- the -- kind of the short 7 term -- that the short-sightedness of that approach, we realized 8 9 that we -- that there was some viable information and possibilities 10 for studies of -- of the system as a whole, that we were perhaps missing, and there was more and more emphasis on trying to -- try 11 12 to take a broader perspective, a broader approach to -- to looking at the systems that were damaged, and when we moved into the 13 14 restoration phase, and -- one soft species that were not recovering 15 system -- components of the system that were not recovering, it 16 certainly made sense to try to get at some of the underlying causes of those things, and that is kind of the -- the crucial step that 17 18 allowed us to then take a broader perspective, not just what the oil did, but why these species aren't recovering, was there some 19 20 other underlying problems that were involved in these systems, and 21 that opened up the door, and made it possible, I think, some -side of the investigation that have much more lasting value in --22 23 in the program, and I think -- we talk about legacies in terms of brick and mortar, I think there's a legacy of -- that we can allude 24 25 in terms of knowledge about the resources, and taking this final 26 step allows us to move into that area, and get basic information

about how these systems work. In the context of the spill, it's 1 2 going to be useful in the long-term for a lot of other things. And, so we felt very encouraged by this kind of change, or 3 4 possibility of change, and in that context, at the same time the -the people in Cordova were getting very frustrated, I think, with 5 6 the -- with the general direction of the scientific program, given 7 the fact the -- they were having a great deal of problems in the fisheries over there with pink salmon and herring, and the failures 8 of those, and out of that frustration and the -- a nucleus of 9 scientist in the Cordova area working with others at the university 10 11 and elsewhere, took it on themselves to propose to the Trustees an initiative called the SEA program -- Sound Ecosystem Assessment, 12 and we'll hear from Peter McRoy later today, one of the principal 13 scientists in that effort -- about that program. And, I think they 14 15 came along at a good time, the process was ripe for it, and the basic underlying idea -- I don't want take Peter's thunder away, 16 but was to try to understand the relationships of -- of strictly 17 the juvenile stages of pink salmon and herring to the ecosystem 18 that supports their growth, and to try to understand what controls 19 20 the production of those species in the system. That program got underway in '94, and is in kind of mid -- mid-bloom here in terms 21 22 of the kind of products and information that it's gathering. It 23 probably has a couple of more years to go. Following that, the -and falling in with this -- sort of concern about studying the 24 system on an ecosystem level, there were initiatives made in the 25 area of forage fish, which the reviewers and many of the scientists 26

1 had recognized for quite a few years as a potential underlying 2 problem with long-term declines of -- of marine mammals and sea birds. And so, that has taken some planning and a great deal of 3 effort. It's an extremely complex and challenging series of 4 studies that have been put together to try to approach what the --5 what's happening with the forage fish base for -- for sea birds in 6 7 particular. You'll be hearing from Dr. David Duffy today after 8 Peter McRoy talks. And, finally the most hard hit system was, we 9 think, the intertidal zone. The oil directly impacted that. There 10 was a lot of clean-up activities that had -- there to conduct as well, and we know that there were problems with major vertebrate 11 12 predators that depend on that nearshore system, such as sea otters, 13 pigeon guillemots and river otters, and we'll be hearing today about a initiative that has been -- that's recently come to 14 15 fruition in terms of a -- a very complete and adequate proposal 16 from the nearshore vertebrate predator group, and Jim Bodkin from 17 the National Biological Service will be talking about that 18 particular project. So, with that kind of short introduction, I'd like to turn it over to Peter McRoy to talk about the SEA program, 19 20 kind of a flag ship of our -- our ecosystem studies so far. Peter. 21 (Aside comments - setting up overhead projector)

22 23 MR. McCORKLE: Let's take five.

(Off record - pause while setting up)

24 MR. McCORKLE: The meeting will please come to order. 25 Ladies and gentlemen are we about stretched out? Let's come back 26 to the table, so we'll have another recess here in a little while. The SEA plan will now be discussed and presented by Peter McRoy,
 University of Alaska, Fairbanks. Mr. McRoy.

3 DR. McROY: Thank you, very much. It's really a pleasure to be here, and I'm impressed by the dedication and time 4 5 that all of you put into this process. We've heard about -- that 6 I as one of the participants, have heard about the PAG for -- for 7 -- since the existence of the program, this whole process, but it's 8 really an impressive service that you're performing, so you're a 9 very important -- important part of the process, and you probably don't get much feedback from those of us out there, but as 10 11 scientist, but I'm glad to see it. But this is just to give you a 12 perspective when you start to think about the ecosystem 13 perspective, this is a satellite imagine, and it's up there in 14 AVHRR temperature -- surface temperature image. But, the Sound -when you start to look at the details of the image --15

(Laughter - about style of pointer on overhead illustration)

17MR. DENNERLEIN:We're simple -- we're simple members18of the public, we like that attention.(Laughter)

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19 DR. MCROY: Anyway, you begin to see that the relationship of the Sound is important to the adjacent ocean as 20 21 well, and that you need to begin to worry about these processes. 22 One, you begin to think about the ecosystem perspective. It's not just a study of fish, even though the sort of target species in SEA 23 24 have been pink salmon and herring and the collapse of these two species, and these two very important commercial populations in 25 26 Prince William Sound. You can study fish just by worrying about

1 the fish and that's sort of classical Fish and Game approach, I 2 might say, although they do more, but in this case, we're as worried about in that context of the environment of the ocean and 3 what the ocean is doing, and how the ocean -- forcing functions 4 5 through the food web as well as the physical environment, has some kind of a control on the restoration of these populations in the 6 7 Sound, and you can see that right away, I see everybody that's been 8 there is sort of looking -- oh, yeah, well why is it warmer or 9 colder over there? Well, we have a lot of these data now that 10 we're using as a way to integrate, as you know the problem when you're out there in a boat, you get data from one spot, but when 11 12 you have a satellite image like that, you can suddenly integrate 13 the data over a broad scale. Okay, this is just kind of summary of 14 SEA, Sound Ecosystem Assessment, the problems that started this, 15 thanks to the fishermen of the Sound, poor pink salmon returns. 16 That is, it is not because of the fishing of the Sound, it's thanks 17 to their pressure on this process, and the collapse of the herring 18 stock. The approach is to have an ecosystem process was the key to 19 understanding the -- the controls of restoration. And, that's our 20 approach. We have done four hypotheses, that is ocean circulation, 21 and we call it lake or river -- I'll give you a little detail of that, being a lake where the circulation of the Sound is relatively 22 23 stagnate and this leads to zooplankton becoming the primary food for -- for all the fish, everything in the Sound, or a river 24 25 condition where the Sound is relatively flushed, and this depends, of course, on the oceanography, it's related to El Ninos, it's 26

related to what's happening in the north Pacific, and weather 1 2 patterns, and in large scale global climate changes and circulation. What river condition -- fish are food; that is, the 3 4 salmon, the young salmon, the juvenile herring are in fact the prime food -- food sources for the predators. So, the Sound we 5 think is switching between these two conditions, not regularly, and б not yet so we can predict it, but we're getting some good evidence 7 8 on this, and the idea that this came from was based on really Ted Cooney's zooplankton data for about ten or fifteen years from 9 10 working in the Sound on that. Then, there is the predator control, 11 or the predator prey hypothesis, which is that in effect that 12 predators determine the stock, that the reason we don't have -it's not success of reproduction in the natal habit, it's just 13 14 predators, that the pollock are in there in a big way now, and 15 they're eating fish and that's it. That's the main control, the 16 main bottleneck that determines the stock size for future years, the success of the -- of this year. Another hypothesis, and you 17 can see that there are teams within SEA of people, you know, oh, 18 19 well, my hypothesis is the right one. (Laughter) You could have 20 one, but mine is the one that -- there's one that is called the 21 herring natal habitat, and this is, in fact, with respect to 22 herring, that the herring population is set in the natal -- in the 23 -- essentially in the spawning areas, that -- and the mortality --24 avoid is what really sets the sock size, buy now avoid being eaten 25 later, you never get to the predators. Your controlled by bad 26 weather, by other sorts of things. It might be in the nearshore

zone where during this spawning, so -- and, then there's over-1 winter. Winter is tough on the young. All of us that are older 2 know that, but we don't tell them. Winter is -- the idea is that 3 juvenile fish -- this is really that limitation for the young of 4 the year. It's getting through their first winter, and that may be 5 6 predation in a different form, it may be the physical environment 7 as well. So, all of those are possibilities. When you look at all 8 of those ideas, they're really not that separate, that is, there's lots of interrelation with these, even though we've stated it, and 9 10 in the -- in the book, which somehow we've dubbed, I don't know why, but the raspberry book, which is -- this -- the newest 11 It's the color, I think, that makes it distinct. 12 document. That has outlined all of these hypotheses in a little more detail, and 13 the -- the hypotheses, but maybe not the glue between them about 14 how they might be interactive, but you can see that, in fact, they 15 16 are, I hope, from that. From that comes the program. So, you have 17 the problem, you have the hypotheses, and then you have sort of research components, and again these are outlined in your book of 18 the current plan, and I just put the FY '95 numbers in there. 19 Ι 20 just took them out of the -- out of the table and -- page 43 or something like that, in that book. But, really this is how the 21 22 research components breaks down in this. Without the oceans, I 23 will argue that you really don't have an ecosystem study, you're 24 studying the fish, you're studying the biology of the fish, maybe. 25 You're studying some aspect of it, but without that oceanography --26 and, of course, I have to defend this, an oceanographer, I have to

1 defend it to my colleagues in this all the time. Why do we need 2 phytoplankton? You know, they don't eat plants, they're (indiscernible). Well, something eats plants. So, circulation and 3 mixing, this is a major part of the program, and some of these 4 numbers are a little misleading because some of the big numbers, in 5 fact, all of the big numbers include our charter time for boats, 6 and that doesn't show up in there because people that have these 7 8 projects, and you may all use the platform for all our other studies, but -- but the charter money for a boat is here, and we're 9 chartering boats out of -- local boats out of Cordova, mostly, 10 right now, or Kodiak, I believe some of the folks in Tatitlek. 11 Ι Circulation mixing, this includes weather, think so, yeah. 12 13 climate, the general oceanography and nearshore oceanography as well. Phytoplankton and nutrients, the phytoplankton are the base 14 15 of the food web. We have some basic program going that -- it's 16 sort of an alternative hypothesis to all of the ones that you've heard because they've all been based on predators or on climate 17 18 events and affecting the success of the fisheries. But, what if I mean, what if it's the variation, just in the amount 19 it's food. 20 of algae that are produced by the plankton, the basis of the food 21 I mean, this is what we call bottom up, sort of the jargon web. these days in marine ecology, but just -- there is this difference 22 23 from year-to-year both in the amount of phytoplankton and in the timing of that bloom. Well, we really don't want to hear that, but 24 we can't -- that is my colleagues who would think it's always 25 26 predators in this, don't want to hear that, but we can't rule it

1 out until we look at it. So, we're doing some work, at least, on 2 phytoplankton and nutrients which limits phytoplankton. A major part of the work is on zooplankton because at times, everybody eats 3 zooplankton, if the conditions are right, and these are really the 4 essential animal food for -- for everything, and the preferred 5 That when the zooplankton are abundant, this is what 6 food. everything eats, including pollock, including all of the predators 7 8 on salmon, on the pink salmon or the herring, they all eat zooplankton when they're there in abundance. 9 When they're not 10 there in abundance, they start eating each other, and then it becomes a more complicated system. I can't speak as well to the 11 12 pink salmon studies or to the hearing studies, since I'm not a fisheries biologist, but obviously they're looking at growth and 13 14 mortality of salmon. There is some experimental fry release project with PWSAC with the -- the hatchery, and then a predation 15 16 study of, in fact, the first release of -- of fry around 17 hatcheries. These are congregations of predators, and that, in fact, very important event may be a -- a major limiting condition 18 19 of birds, of other predators that tend to congregate around 20 hatcheries when fry are releases. So, we're considering that. 21 Herring has a long way to go since it's just getting started now. 22 Juvenile growth and habitat energetics tell about how these survive 23 since they're basing their ideas on a lot more of the energetics of 24 the fish when they are very young. Then, there are several component projects that are looking at predators. Bird predation 25 26 on herring, trophic interaction, this is just an isotope technique

and this may be shuffled around within many of the projects in the 1 2 Sound right now, because it's such a useful tool. This is just using stable isotopes of carbon and nitrogen as tracer in the food 3 4 web and it tells you pretty much what trophic level these animals are feeding on and more or less, not guite who's eating whom, but 5 at least trophic levels. Then there's a nearshore fish, and this 6 7 is a program using acoustic techniques, and it couples well with 8 some of the other things you'll hear about in forage fish and other 9 things, and these people are meeting to share their expertise. 10 But, this is using acoustic techniques, in other words to get ideas of the prey field, i.e. the prey and the predators in the Sound, so 11 that you can do that now with these nice techniques. 12 You don't have to try to pull a net through them all the time to -- and as 13 14 you know, the limitations of nets, so -- and then salmon predation. This is another salmon study. This has got most of the charter 15 16 time for boats and things in it, that's why that's so large. There 17 is a major component of the result of all of this is really the 18 ecosystem analysis and the modeling, and this is something that all of the investigators participate in, and it's one of the --19 20 probably the primary way that -- that this would lead to some -- to a restoration strategy, since with modeling you can do what-ifs, 21 22 and you can look at your data and understand what environmental 23 limits might be constraining recovery of these populations. The 24 monitoring program is probably said to be one of the products at 25 some -- some far -- down the road, some end point of the whole 26 program. So, that's sort of how it hangs together. I'd be glad to

answer your questions. I show you just two examples here. 1 Yeah, 2 this is the river situation in the Sound where the -- the flow from the Gulf is very strong, and because the residence time for the 3 4 animals -- the animals, that is the zooplankton, it's two things. There in deep water -- the Sound is so deep, there, it's like the 5 deep hole with 700 or 800 meters, which being on a shelf, the 6 connection to the open ocean has a nice deep channel in it as well, 7 so that there are animals from the Gulf, as well as residents that 8 9 over winter there, and those over wintering animals are the key to 10 what happens in the spring. They're coming back to the surface now, they'll start showing up in May, and that's what everybody 11 eats, but they born last year, so we're sort of hindcasting, and 12 you really can't put this together without a good modeling and 13 We're hindcasting to how the zooplankton did 14 database program. last year, looking at the success this year, for the fish for next 15 year or two years down the way, I guess is sort of how it works 16 That's -- that's what we think happens, under strong flow 17 out. conditions, and this -- this sort of weak flow through here where 18 this large part of the Sound, (indiscernible) gets this flushing 19 20 and circulation. This is what we call the lake year here. Our 21 jargon terms, more or less, of lake years. But, in this case, 22 there aren't the big populations of zooplankton, so pollock are eating salmon, they're eating herring, they're eating everything 23 they can. The fish are eating fish then, and we think that's one 24 of the major -- there are other options in this, but the evidence 25 26 suggests that this is what's happening right now. So, oh, let me

1 show you one -- I won't show you too much data, I'll show you some 2 data (indiscernible) -- this is some data from 1994, and it's phytoplankton versus zooplankton, and you see that this -- this is 3 the spring increase in phytoplankton, and it's occurring now in the 4 Sound. We had a crew that just came back on Monday, and things are 5 really cooking out there right now, as you would see the plants are 6 7 growing, things are going really strong, and so this looks like a typical year. In -- that is this year, 1995. 8 1994 it started in 9 April and then it stopped, and then it came back, and it was about 10 two weeks later than the long-term average, that what we think is 11 the long-term average. There are some data from some of my earlier 12 work and some of the work that we did at the beginning of the whole 13 oil development of the Sound in the '60s and the '70s, there. So, 14 '94 was the late year, but the zooplankton, this is the zooplankton 15 response, they were late as well. It looks like the zooplankton 16 are tracking the phytoplankton, the phytoplankton are late and the 17 zooplankton are late, and we're not sure why that should happen, 18 but the few years of data that -- and we've got these continuous data from a buoy that's in the Sound that gives us weather, some 19 oceanography and the signal that you can measure of phytoplankton. 20 21 It's very nice, at least that you can sit at your desk and find out 22 what's going on in the Sound without getting cold and wet all the 23 Thank you. Well, I'd be glad to answer some questions. time. 24 MR. McCORKLE: Hopefully, there will be some questions.

25 Pamela.

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MS. BRODIE: I'm a great appreciator of pure science,

but it in all this, in the science program with the Trustee 1 2 Council, I have a questions of how it relates to restoration because that's what the funding is for restoration, so, I was 3 wondering if you could tell us once you find out the things you're 4 trying to find out, what sort of restoration actions that could 5 lead to. Like, say, you find out, well, the problem is winter is 6 really tough, these little baby fish aren't getting through the 7 winter, what do you do about it, or if you find out there's too 8 much predation from birds, what do you do about that? 9

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DR. McROY: Well, you could kill the birds, I suppose. MS. BRODIE: That's a possibility. (Laughter)

The problem is that obviously we can't 12 DR. McROY: change the north Pacific circulation. Well, we could. In fact, we 13 are changing it with CO2 and other things, but we can't do that 14 really on a practical scale. What we're looking for is why didn't 15 16 these populations recover, when presumably the damage was done and 17 it's over. What's the environmental constraints there. Now, there 18 are some management strategies that are possible. See, you're asking me to tell you the results of the project before we have it, 19 but, for example, it's possible to release the hatchery fish at a 20 different time of the year, hold them, make -- let them go. 21 They do this to some extent already, but they do it largely based on 22 That's why we have a nice zooplankton data series, 23 zooplankton. 24 because the hatcheries collect plankton once a week, and they look 25 at the amount of zooplankton in the water, and say, yeah, okay, release them now because the food is here. 26 So, that's a

possibility to restore that. The difference in the wild fish and 1 the hatchery fish is very interesting, because they both -- they 2 both went down, they both crashed in that, and you would think that 3 well, what does that suggest. It suggests a food problem rather 4 than a temperature or a cold winter or something, or even the oil 5 in that sense, I don't know. There are a few other options 6 possible, but not very many in terms of actual manipulation. 7 8 However, it would explain the restoration attempt and where the 9 environmental controls are on restoration of this. We should be able to predict then what the long-term restoration is and why, we 10 I mean, we're not -- we're sort of -- for example with 11 think. 12 herring, with herring there is no herring hatchery, there is no -nothing anybody is doing with herring except watching it. One of 13 the possibilities there, to shut down a fishery? 14 I mean there, when we're really talking about ecosystem level management, in SEA 15 16 we're talking about human activities, and what can we do, how do we 17 control those. Unless you're in a nearshore area, by in large. Those are our options. 18

DR. SPIES: (Indiscernible) the management of the fisheries certainly, if you get some pretty good predictable relationships, a year or eighteen months ahead of the harvest, then I think that allows adjustment of the expectations, and also (indiscernible) adjustment of the harvest for the fish return. So, I think there's some real management there.

25 DR. McROY: There may be -- because you're asking me 26 about the fish, and I'm clear at the other end of the system, but

I am (indiscernible) much about the fish per se, but there are some
 other possibilities with herring.

I -- I didn't mean (indiscernible). MS. BRODIE: 3 MR. McROY: Yeah, but there are some -- some 4 possibilities. For example, part of the natal habitat hypothesis 5 6 is looking at -- at, let's say, diversity of habitat that herring 7 use in the Sound, and it's possible that some of these are really the areas that produce herring, and that we can do something about 8 that. We know that there are fewer environmental constraints here, 9 10 there's lower predation in these sites or that, and that these could be enhanced either by -- even sea manipulation, which is not 11 The Russians have done it. I think the Russians have 12 possible. 13 used spruce trees to enhance herring production. I don't like to 14 see -- we can't eat the spruce trees with eggs found in them, but there's a ... 15

> MS. BRODIE: So, logging spruce trees? (Laughter) DR. McROY: You could plant it, what can I say.

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18 MR. BECK: I have a few questions. Are there other 19 examples around the plant of ecosystem analysis on this scale and 20 its subsequent, you know, intervention and management. Is this, 21 our leading edge or the Russian and everybody is doing this. How 22 does this fit into the world research and science management?

23 DR. McROY: There aren't very many, but it's certainly 24 the trend. It's certainly what's going on. Because the classical 25 approach is either in oceanography or fisheries, we're pretty much 26 an all year fisheries, oceanography and we don't even read the same
1 literature practically. I mean, that's been a traditional view 2 throughout too many areas of science, and -- and that didn't result (indiscernible). I mean world fisheries are in -- in a crisis. 3 4 Look at the Grand Becks (ph), look at the North Atlantic, even North Atlantic herring was one of the major stock that have been 5 examined by herring biologist for a long, long time, without a 6 solution. But, now there are programs now LOBEC (ph), which tends 7 to say, well let's now look at some of these other food organisms 8 and how the environmental conditions are controlling them. PISCES, 9 10 which is NOAA of the Pacific fisheries organization that is looking essentially in a whole multi-government, I think there are six 11 countries in PISCES, U.S., Canada, Japan, China, Korea, maybe ... 12 DR. FRENCH: Russia. 13

DR. McROY: Russia, yeah, I think they added Russia as well, and they're trying, that's their whole approach is that we couldn't do it with our more or less traditional techniques, that it's got to really sort of rise to the ecosystem level, and that.

18 MR. BECK: Well, have to have other examples that 19 have been going to the point of enforcing the idea of ecosystem 20 analysis, and then going on to intervention and restoration, and 21 some form of track record of success on the other side of your 22 analysis.

23 DR. McROY: I think it's a little early to go all --24 to go all of those steps yet, but that's essentially where the 25 Canadians are going with their fisheries on their coast looking at 26 restoration of cod, even halibut, and other things. That's just what they're doing. There are other various that that will happen
 with, but they haven't gone through all of the program, that I see
 it (indiscernible).

MR. McCORKLE: Further questions? Dave.

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5 MR. COBB: Yeah, on you phytoplankton/zooplankton 6 studies, are those confined mostly to the central Sound and 7 southwest district, or have you taken a look at the eastern 8 district, the Valdez Arm area?

9 DR. MCROY: Yeah, we have taken a look all ___ 10 throughout the Sound. We start from Cordova, generally, on cruises, so we start taking -- sampling stations. The buoy, which 11 12 is our remote array of instruments, is in about the middle of the 13 Sound. It's -- and so that's where our best time series come from 14 that buoy is right about there. There's heavy activity concentrated over here because of the hatcheries, and this is where 15 16 the fish tend to congregate and move out of the Sound. The flow 17 coming in here and going out there. But, our oceanography program, 18 and sort of our larger scale plankton fish studies, start really in 19 the Gulf, just adjacent to the Hinchinbrook Entrance, and this 20 eastern side, and we even have a few -- even a few stations into 21 the Arm, now. So, because the eastern Sound is important in the 22 food scheme of this system.

23 MR. COBB: Yeah, because I know we -- at the hatchery 24 in Valdez -- we haven't seen the drop or the crash in the 25 zooplankton, phytoplankton that they found in the southwest 26 district. Our levels have actually been in near record levels for the last three years, and so, it's -- it's a good control
 mechanism, or, you know, something they can compare with, and ...

DR. McROY: It's something we found out last year at our first intensive year is that there is a lot more sort of local habitats in the -- in the ocean than we thought. Well, you can see that a little bit from the satellite images, but it really shows up in lots of other things as well.

8 MR. COBB: And your predator-prey relationship, 9 pollock to herring, I think one of the things you mentioned is possibly -- Dr. Spies mentioned also, was the management tool to 10 adjust harvest, where you found this -- the pollock population. 11 Ι know they're huge out there and with -- the pollock season this 12 last winter, it didn't even tough it, and so there is a concern by 13 everybody in Prince William Sound that that population be brought 14 under control. 15

DR. McROY: Yeah, that is certainly one of the possible strategies is to put a heavy fishery in on the pollock, and I think that was the first big fishery in the Sound for pollock this past year.

20 MR. COBB: I think nearly, better than 50 percent of 21 the total pollock harvest for the Gulf and adjacent waters was 22 taken inside of Prince William Sound, for the first time ever.

23 DR. McROY: We see pollock as a major predator. Squid 24 are a big predator in the Sound, and these are even tougher to work 25 with because they're not commercial and our people never pay much 26 attention to this, but they're very effective predators, and, you 1 know, you have to be careful with the pollock and the squid interaction here, but how that works, but those are the kinds of 2 techniques that we're looking at. However, a good model should be 3 a big help, you know, and not just, oh, we over fished it again, 4 wrong time, or we fished at the wrong time. We should be able to 5 avoid those mistakes with this, and should be able to see that 6 herring population back to where it's up about 20 million or 7 8 something like that.

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MR. McCORKLE: Dr. John.

Excuse me is I'm wrong, but it's my 10 DR. FRENCH: impression a lot of the studies leading up to the -- the 11 development of the SEA program, were part of -- first of all to 12 13 help identify the fact that it was a major pollock population in the Sound, and second of all, with relationship here, your predator 14 hypothesis, but within the context of the rest, and I want to 15 emphasize that it's valuable to have it, within the context and the 16 17 whole model, that is allotted, even within the first two years of the SEA project, to be quessing that maybe these management tools, 18 such as the pollock, but I hadn't heard about squid before, but 19 squid, can effectively be used to -- to help the herring recovery 20 and the pink salmon recovery, as I understand the data. 21 I think there's -- I'm very surprised at how positive the results have been 22 23 in two years of this project.

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MR. McCORKLE: More questions? Yes, Pam.

25 MS. BRODIE: I'm not sure if (indiscernible), but the 26 vertebrate predator person, but I'm interested in this idea there's 1 -- there are a lot of pollock in Prince William Sound because we've 2 got frightening declines of harbor seals and stellar sea lions 3 throughout the Gulf of Alaska, and one of the theories is that it's 4 over fishing the pollock that's cause the decline of the marine 5 mammals. Do we have a decline of stellar sea lions and harbor 6 seals in Prince William Sound, also?

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MR. BODKIN: We certainly have a decline.

DR. McROY: Yes.

9 MR. BODKIN: Very dramatic decline. Decline that 10 basically stopped in the eastern Pacific Ocean between Prince 11 William Sound and Southeast Alaska. In Southeast Alaska we don't 12 see the decline in either stellar sea lions or harbor seals, but 13 around Prince William Sound to the west, throughout the Aleutians 14 the declines are -- are dramatic.

15 MS. BRODIE: So, this is evident that pollock over 16 fishing is not the problem.

MR. BODKIN: Yeah, not necessarily. The populations of sea lions in Prince William Sound are fairly small, relative to the total population of the north Pacific. In fact, to my point of view that -- that the recent increases in pollock might be a result of the decline in the -- and then localized (indiscernible), but cause and effect here is very difficult to demonstrate. You know, it's almost all ... (indiscernible -- end of tape).

24 MR. McROY: Yes, that is one of the components of this 25 -- just as you correctly identified, that -- that this energetics, 26 herring, pollock, and in fact -- this is A. J. Paul at Seward who

will be doing that work and he will do this in the -- I think in 1 the nearshore fish -- forage fish program as well. I think he's a 2 part of that, is that right? (Aside comments) That's APAC 3 4 (indiscernible). Okay, anyway, it's being done. Yeah, and that -just exactly that. I think comments from all of you and questions 5 6 are really important to us, because you know how it is when you're in your field and your looking at -- boy, look at those great 7 8 satellite images, right? You got to keep asking those questions. 9 MR. McCORKLE: Thea.

10 MS. THOMAS: I know a lot of this research is being 11 funneled towards this modeling effort, and I was just wondering has 12 anything been planned about making some of that modeling 13 information available to groups like this that are trying to advise 14 on restoration decisions, in the future?

It's a good suggestion. I don't know what 15 MR. McROY: 16 the state of that is though, but there is a database, a singular 17 database that will be available to -- to anyone in this, and I 18 would envision that there could be an access point here where you could say, well, let's have a look at those -- those figures and 19 20 those pictures that -- that they should have a direct connection at 21 this office as well. But, it's available to anybody in the -- any of the EVOS projects right now. The models are just developing, so 22 23 it would be nice if at some future meeting to be able to do a model 24 to ask the questions about it here and see what it looks like, if 25 it's really worth anything or not (indiscernible).

MR. McCORKLE: Yes, Brenda.

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MS. SCHWANTES: I'm just wondering, how long will the 1 information that you're trying to -- to get, how long will it be 2 3 useful and accurate and valid, and so forth -- I quess in two senses, one is the management sense, and the other would be just a 4 long-term research sense and then that, you know, that will be good 5 6 forever, but in the management sense mostly, how long will the 7 information be really accurate statistics, you know, all that stuff, and then will it have to be repeated again, or should it be 8 in order to keep the information accurate? 9

10 Yeah, it's -- it's hard to answer that MR. McROY: question with a time, but we would hope that we would lead to some 11 12 direction that -- that this would be some important basis for new 13 information about both what we do, and what future scientists and 14 people do, they are both management and scientific work. As well as one of the down-stream products of this, is to be some sort of 15 16 monitoring as well. Perhaps you don't need to do this -- the same 17 detail that we're doing right now, but you should do something, and 18 this just gives you some sort of pulse of the system, and we hope 19 that we can identify some critical points of where you can get that 20 pulse that means something to things like herring or to pink 21 salmon, as well. On the other hand, we hope that we're always 22 learning new things, and it would be fine to learn some things and 23 say, yeah, no it's completely different even though we did the best 24 things we could. That, I don't expect that, but it could happen. 25 MR. McCORKLE: Here's your last chance to have at Mr. 26 McRoy. If not, we'd like to thank you very much, and would like

you to stay as long as you can. Who knows when another question
 may come up. We'll stand at recess for few minutes while we set up
 for Dr. Duffy.

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(Off Record 2:35 p.m.)

(On Record 2:43 p.m.)

MR. McCORKLE: We'd like to talk about sea birds and forage fish, and we'll do that with Mr. Duffy at this time.

8 DR. DUFFY: Well, I was brought into this project at the end of this last year, and I sort of entered this situation 9 10 where there were a bunch of PI's and they couldn't quite get themselves together, and I'm reminded of the joke about how many 11 12 Ph.Ds it take to screw in a light bulb, and the answer is no one 13 knows because they've never managed to do it. But you put Ph.Ds 14 together and get discussions going, and it's amazing how slow and 15 painful it can be, especially when they all want to do the same 16 thing, and basically are in agreement. And, so in some ways, this 17 is a budding project we had a first year in the field, but it 18 really is yet to reach it's full complexity or its full promise, 19 and that's what I'm going to talk about -- our coming field season 20 and how we're going to approach this. This project really had its 21 origins back in the '70s and '80s when a series of surveys of sea birds in Prince William Sound set some baselines, and then there 22 23 was a small event in the late '80s that contributed to the 24 complexity of what we're addressing. From the first survey, we 25 noted about eight species of sea birds have declined in the last 26 ten to twenty years, and since the oil spill, at least three of

them have not recovered, pigeon guillemot, conure (ph) and the 1 2 marbled murrelet. And, there -- there's a long-term question and a short-term question, and they're basically the same -- why have 3 they not recovered, and there are a variety of hypotheses, and for 4 conservationist and for data species people, the ultimate nightmare 5 is predation. There is one theory that bald eagles and turbin (ph) 6 7 dolphins are responsible for the non-recovery of several species, 8 so you can imagine, if you want, what you do about that, and I'll 9 defer any questions about management options on that to other 10 people. There also possibilities of things like disease or climate 11 change are responsible for non-recovery, but I think there actually is a sort of unending stream of them. My favorite is ticks, I use 12 to worry about ticks, and they were responsible for just about 13 everything bad that happened to me in the universe, and we just 14 discovered lyme disease in Alaska, so I can blame possibly lyme 15 disease. But, really, seriously, you have to rank the hypotheses 16 17 about why things are not recovering, and the most obvious in terms of traditional sea bird biology, everything we know about sea birds 18 suggests that the most important factor is not predation or disease 19 20 or climate change, although all those may be important, but even if these are occurring, most of them tend to be expressed through 21 food, and most sea birds are believed to limited -- populations are 22 23 believed to be limited primarily by food, and we have some evidence 24 from the north Pacific that has been -- that there have been shifts 25 in food, and that we've gone from a -- like the rest of the U.S. 26 evolution theory, we've gone from a high fat diet to a Lean

Cuisine. Here it's -- I hope I don't go off too much. 1 This is Middleton Island (pointing to overhead illustration), and this is 2 3 Scott Hatch's (ph) data from -- this is (indiscernible) '78 to '94, and you see the sand lance have vaguely disappeared and the 4 5 pollocks have gone in. Sand lance are a relatively fatty food, 6 pollock is a lean cuisine. A rhinoceros auklet -- we've seen a decrease in sand lance, and a increase in others, not as dramatic 7 8 an increase in pollock. That's in Middleton, which is, of course, 9 outside Prince William Sound. John Pie (ph) has summarized what we 10 know from Bering Sea, Prince William Sound, and the northern Gulf of Alaska, and we find a pretty striking pattern from '77 -- from 11 '75 to '78 to '88-'91. We find the disappearance of capelin, which 12 is a very high fat food, just disappears, everybody goes on a diet, 13 and pollock makes an appearance with squid, which are two foods 14 that you can really lose weight on, and subsequently, it appears 15 16 that populations all over the north Pacific have been going down 17 hill. It's not just Prince William Sound. So, that the question really arises, if it's happening on the rest of the Sound -- we 18 19 have some evidence from within the Sound that, I think, it's pigeon 20 guillemot have shifted from a high fat diet to a pollock or 21 demersal diet of a lower fat food, perhaps it's something happening 22 with food that we need to understand for a couple of reasons. One, 23 is that, if they're not recovering because of some natural shift, 24 we need to know this. Also, if we can begin to understand in the future of what we're likely to have happen in terms of sea bird 25 26 populations as populations of fish come and go. There's a second

layer to this -- to these questions -- it's not just -- is it food 1 just affecting sea birds, but also why is this happening? 2 Are there interactions between capelin, herring, pollock -- (aside 3 comments) even pollock, and sand lance that are responsible for 4 5 this. And, here's some very initial data from Molly Sturdevant 6 (ph), looking at diet (pointing to overhead illustration). These of 7 are very biased samples because some them were taken 8 deliberately where fish occurred together as opposed to perhaps where they would have occurred -- would have -- were they separate 9 10 -- diets may have been very different. So, you expect an overlap on some of these samples, and some of these samples are quite 11 12 small, but we have pollock and sand lance, then you have high 13 overlap in diet. We have herring and capelin seem to have high 14 overlapping diets. I'm sure these -- this story will be completely 15 changed by the time Molly is through, but there may be some strong 16 trophic interactions between species, field interactions going on, not just species eating each other, but also species competing for 17 18 the same food, and so, we need to understand why the species differ 19 and what sort of inter -- competitive interactions they might have. After months, literally months of heavy negotiations, with those 20 21 recalcitrant Ph.Ds, we cooked up what I think is a preemie project, of we hope will run for five years in a rather substantive form, 22 23 and then we'll taper down to monitoring. The first year, though, is going to be really an iron test of our hypothesis, is it food, 24 25 and it will also be a test of whether the message we have are 26 sufficient to approach this hypothesis. In the first year, we'll

be looking at the growth and success of birds in relation to their 1 diet -- the fatty foods, mean you do better from fats to -- and 2 you're young live -- live better. We're going to look at the 3 4 distribution of food through acoustic sampling. This will probably be the best, and I don't say this with any -- this is relatively an 5 objective because I'm -- this will probably be the best of acoustic 6 sea bird comparison done, simply because we have such good 7 8 cooperation between the sea bird people and the acoustic people. Usually, there is fair bit of friction, and the sea bird people are 9 10 trying to basically steal the data from the acoustics people or We're going to look at the distribution of birds in 11 vise-versa. relation to the acoustics. Do certain species of birds feed only 12 on big patches of fish, and could that perhaps explain why some 13 birds don't do well in the Sound, because the patches aren't big 14 15 enough. There some evidence that common murres require big patches of fish, and from what we've seen, the patches, except for spawning 16 17 herring, tend to be fairly small in the Sound. We're going to compare the diet and growth of sea birds in -- within different 18 parts of the Sound with an area that we know is food rich, or at 19 least was food rich last year, the Barren Islands. We don't pick 20 21 any capelin, or very little capelin, in Prince William Sound right now, and the Barrens were sort of knee-deep -- or belly-deep for a 22 halibut -- in capelin last year. If that pattern repeats, we'll 23 24 have a chance to look at what sea birds do in a really good fat food environment, sort of the McDonalds of fish, versus the --25 26 apparently the very lean food environment for the Sound. We're

also going to be developing a test of whether -- we can go and use 1 2 charter boats -- fish stomachs, things like halibut and cod, when the stomachs are discarded, just look in them and see if this is a 3 good way of finding out what the distribution and relative 4 5 abundance of things like capelin and pollock in the environment. And, perhaps over time, can we use this as a way of replacing the 6 very expensive acoustic devices, the acoustic surveys that we plan 7 If -- the iron test is if we simply find no variation in 8 to use. diet or in growth or distribution of fish, or we find way -- way 9 too much variation, then we really don't have anything to go on 10 with, and at that point the project would -- would probably end. 11 12 More likely, people are going to find there are a couple of leads that are very profitable, that certain species are easy to work 13 14 with, certain sampling methods work, and address questions adequately, and so we would funnel our attention and resources into 15 16 these. And, the next five years, we would take advantage of inter-17 annual variation, natural experiments from year to year, and look at the effect of changes in fish abundance of different species on 18 bird reproduction and distribution, and we also would try to 19 20 correlate changes in fish population trends with their biology. Do 21 -- can we simply go out and sample a bunch of herring, and see that they're fatter and find out that this matches some sort of trend in 22 23 their long-term dynamics. There's a -- possibly a good experiment going on this year if we have almost no herring, and if sea birds 24 25 are dependent on fatty herring early in the season to get enough 26 fat so they can start reproduction, and if we find that we have a

1 total collapse this year in sea birds, that will be a -- sort of a wake-up call that that -- one of the key times these species for 2 successful reproduction. It's that sort of simple model that we'll 3 be testing, and we'll be hoping that over the five years, we'll get 4 enough variability, so that we can begin to develop a picture of 5 6 the different species' world and their interactions with fish. We'll be doing this -- the other thing we hope to do over the five 7 8 years is to work with people in Prince William Sound to get an idea of their historical and traditional knowledge of bird fish and 9 10 marine mammal interactions. Are there certain things 11 observations that they -- that we can take advantage of -- fishing 12 hypotheses come out of a long-term familiarity and experience with 13 the Sound. I've been working on over-fishing as a problem around the world, and it's really sort of become obvious that a lot of 14 fishermen tend to -- five to ten years -- before the wake-up call 15 16 arise, these people are always saying, there's a problem, and so 17 there is a traditional knowledge out there that may not be exactly 18 testable in the traditional western scientific way, but it may add greatly to our understanding. 19

Another thing I should point out is that we have two big handicaps. One is that we -- for a lot of Sound we really know almost nothing about the basic natural history of a lot of these species, and it's real hard to get involved in a lot of models, theories and hypothesis testing, if you don't know when things spawn, what they eat, where they are, and so a fair bit of their work is going to be simple grunt, basic biology of nailing some of

these things down. The other thing that we have a problem with is 1 that some of the events that occur may be important events, may not 2 occur every year. There's an 18.6 year cycle that affects salmon, 3 or appear to affect salmon. There's the El Nino cycle, which until 4 recently we thought was every four years, and now it seems to be 5 every year, so we have a good chance of getting one of those. And, 6 7 for some other marine ecosystems of -- we know that fish populations fluctuate when these events occur. They don't -- their 8 9 stability is an event, and then things change, and so we may not get the full spectrum of variability -- of important variability in 10 11 the Sound, even in five years, but we might not even get it in 12 twenty years, but at least we'll begin to get a start on what the natural variability is. In some ways, we'll be able to speed up 13 the process because we'll be cooperating with the National 14 Biological Survey and the Fish and Wildlife Service -- National 15 16 Biological Service, all right, and the Fish and Wildlife Service --17 to look at the Barrens and Kachemak Bay, as well as within the Sound. And, I just wanted to run through one example of this with 18 you. What we'd be doing in the Barrens is using the same method we 19 20 would use in the Sound to compare things like common murre, puffins and common murre and puffin diet, and see if the diets differ, just 21 22 Within the Sound we'll be looking at pigeon accepts differ. guillemots, and we'll also be comparing these with Kachemak Bay, 23 and we''ll be looking at diets whether pelagic or a demersal fish, 24 and we'll be trying to look at what success looks like. 25 For kittiwakes, we're also going to be collaborating with a Fish and 26

Wildlife survey that's been going on for a bunch of years, and I 1 think there about 26 colonies of kittiwakes in the Sound of 2 different sizes, and what we hope to do is -- we'll be looking at 3 the foraging of the kittiwakes to the colonies, and from past work 4 we know that most kittiwakes tend to feed within about five 5 kilometers of their colonies, and acoustically, we'll have some 6 idea of the abundance of fish within 5K of a lot of these colonies, 7 and we'll be able to compare, just within the Sound, does it make 8 a difference if there's lots of food -- oops, the nightmare is when 9 10 you can't figure out which way it goes (referring to overhead illustration) -- of -- is there -- does food variation within the 11 12 Sound make a difference in kittiwakes' reproduction success. At the five kilometers scale, or -- and there is another scale which 13 14 -- seems to be important to them, about forty kilometers is their 15 foraging range, they can forage without running into energetic stress. Beyond that, it appears that they're spending so much time 16 17 and using so much energy to get food that they fail to bring back enough food for their young to do well. So, we'll be looking at 18 the distribution of fish, we'll be looking at nesting success, and 19 we'll have radio-tracked birds to tell us how far these birds are 20 The longer-term goal for this project -- just to give you 21 going. 22 an idea of complexity of it -- if I were doing a model like this, I'd probably be shot on sight -- this is just the data flow. 23 So, 24 a lot of our time -- (aside comments regarding overhead illustration). A lot of our time is devoted to try to coordinate 25 26 people, making sure everybody's doing the same thing, and making

sure that we're going to get data in the right sequences, so that 1 2 everybody can use it. Our long-term goals, they're sort of two ambitious ones. One is to -- I -- I would hope that we could end 3 up using birds as basically a probe of Prince William Sound to 4 monitor of the state of the Sound, to look at whether there are 5 changes in fish abundance, and what these mean for birds and for 6 7 other predatory fish, that are of commercial or charter importance, 8 and by -- after five years, I hope that we'll have calibrated a 9 couple of monitoring schemes, so perhaps someone -- may -- this may 10 be extreme, but someone may go out in July and put a bunch of 11 screens in front of puffin birds, get a diet and from that we can 12 tell basically what the deeper fish are in the Sound that year. Someone else may go out and spend a bunch of time poking around in 13 14 charter fish -- charter-landed fish -- and that will give us 15 another index of what fish are there, and finally, a survey of 16 kittiwake colonies may give us an overall index of the health of 17 the Sound in terms of sea birds. And, sort of a more complex, but equally important, We'll be able to separate, we hope, natural 18 19 variabilities and changes in prey and sea birds from human 20 generated effects. I don't know if that one is ever going to be achievable, but maybe -- sort of like -- failing -- exceeding at 21 22 failing may be more interesting than succeeding at something less 23 ambitious. Thank you.

24 MR. McCORKLE: Thank you very much, Mr. Duffy. About 25 questions? Yes, Kim.

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MS. BENTON: I have a question on the last chart that

you were showing, it listed four species that were to be studied.
 Puffins and kittiwakes were one of them. I was trying to find it
 in the restoration plan, and I don't see that those are two species
 that were listed as injured.

No, we're using those really as probes. 5 DR. DUFFY: Puffins are elsewhere in the Sound -- I'm sorry, elsewhere in the 6 7 north Pacific and Gulf of Alaska. It turned out to be really superb ways of going after fish. So, it's really -- one, its --8 9 using puffins for that. Kittiwakes are one of our better long-term data sets, and there's a difference in the two species. Kittiwakes 10 are a surface feeder, and puffins are a deep diver. So, one of the 11 12 things I haven't talked about is simply the -- sort of the practicalities of the studies. There are a couple of birds --13 puffins are relatively rare in the Sound, murres are very rare, and 14 15 those are two birds that are really excellent survey probes, so we 16 had to basically take advantage of what -- what was there in order to survey, and the idea is to build up a basic picture of fish 17 18 abundance that can be used for other species, like pigeon 19 guillemots, marbled murrelets -- murrelets, things that are much more difficult to study. So, we're going for a big understanding 20 21 of fish distribution and abundance that can then be applied to other species. There went my nightmare is being told that I would 22 23 have a million dollars to study murrelets. I think I would go 24 raise oranges in Florida, or something. There's some species that are so difficult to work with. 25

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MR. McCORKLE: Pamela, would you like to ask a question?

MR. BRODIE: Are you making fun of me? (Laughter). 1 No. Pamela asks the right 2 MR. MCCORKLE: No, I'm not. 3 questions. I'll (indiscernible - out of range of 4 MR. THOMAS: microphone). 5 Okay, who was that, Thea? MR. McCORKLE: 6 7 MS. THOMAS: Yes, from that first presentation we learned that there is going to be several vessels chartered for the 8 SEA plan, and then a large, intensive acoustic effort, and I was 9 10 wondering if you plan to coordinate with that effort and how? Last month, or this month, there was a 11 DR. DUFFY: meeting -- this is coordinating methods down in Cordova. The SEA 12 plan tends to sample earlier in the year, and we tend to sample 13 14 later, and their purposes or their objectives are slightly 15 different, and their target areas are different. But there's the 16 variety of data sets that are common interest and common use. The 17 sea bird people (indiscernible) on board for sea bird observations to look at bird distribution and flock size in response to fish 18 19 school size, will be on both sets of boats. We hope down the line 20 that some of the zooplankton work will be combined from both areas. 21 We will be dependent on them for a lot of the oceanography. We're 22 still -- coordination between the three groups is going to be an on-going process, and it's not as far along as anybody would want, 23 24 but it's still evolving, and the lines of communication are wide 25 open, and speaking personally, so far, it's been really good, 26 really helpful.

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Yes, Chip. MR. McCORKLE: 1 2 MR. DENNERLEIN: Can I make a -- I ... 3 DR. DUFFY: I can tell you when they're enthusiastic. I'm enthusiastic, but I just make an 4 MR. DENNERLEIN: 5 observation. If you look through the Restoration Plan and you look at the numbers, there's more here to do than already we have money 6 7 for, and I would encouraged the ongoing process of communication, and the room full of Ph.Ds to get with the business of coordination 8 toute suite, because there's more here to do than we're going to 9 10 spend, and the coordinators are going to get a good recommendation 11 from me, and the less coordinate of folks are going to get a less 12 recommendation. And, I don't mean that in any negative way about these studies, I'm just saying, you brought to us the issue that 13 14 it's difficult to get a room full of Ph.Ds to screw in a light 15 bulb. To the extent they can screw in light bulbs, we're going to 16 get more of this work done because, as Bob pointed out earlier, you 17 just need to look at the numbers, and we already know that that 18 there are going to be proposals coming in May 1, and, you know, all 19 of this has to be ...

20 DR. DUFFY: Let me just say that Bob and Molly are 21 very good at helping those who are putting projects together. I 22 can speak softly because ...

23

MS. McCAMMON: We speak loudly.

24 DR. DUFFY: They carry a big stick. So, it is some 25 ways my job has been delightful. I've got people's attention 26 because I had that support.

Ron, just the fact that -- I'll just 1 MR. DENNERLEIN: follow up to say that the fact that one of the birds study folks 2 are using the same set, you know, of boats, chartering is very 3 expensive, that things that we really like to hear, and the 4 questions that we would ask, not in the scientific question, but 5 6 sometimes, you know, your target areas are just -- are a little different, but if you adjust them just a little bit, you get 95 7 8 percent and suddenly you can overlap operations. So, those are the kind of things that -- that I'm looking at. 9

10MR. McCORKLE: Where were you two years ago? (Laughter)11There was a question over here. Kim, was it, or Pam?

MS. BENTON: I have -- I have a two part question, the first one is, over the five years do you know what the total cost is estimated to be, and then can you tell me just roughly here, percentage how broken down -- what percentage of that is going to be spent on actual data collection, and then how much of it are we going to be able to spend on actual restoration?

DR. DUFFY: The first one was total cost. We're -- I 18 19 don't know what the numbers are in the book, in the raspberry book, 20 but as -- we're working on almost a little less than \$1.2 million 21 this year. We're going to add -- try not just to ask for anything, if not nailed down. We're going to be asking for somewhere between 22 23 \$1.5 and \$1.9 for this coming year, but I don't know how that will 24 play out. It's going to be -- it should be dependent on our first year results, and there may be some projects we just can, no matter 25 26 how good they are, because they're not going to give us answers.

We canned a really beautiful one this year -- or we canned two. They were great science, but really didn't fit in first -- the first is-it-food route, and -- actually, a bunch of projects got turned back because of that. So, I don't know. It depends on how things go this first year, and what lines of -- look profitable to attack.

7 MR. LOEFFLER: Dave, I'd like to augment your answer for 8 you in the -- that the projection -- the initial projection in the 9 raspberry book, which I'm sure will be modified, on the basis of 10 the first year results, but it gives you an order of magnitude --11 it's roughly for 1995 and 1999, those five years -- about \$10 12 million, maybe a little less.

This biggest expense for us is putting a 13 DR. DUFFY: boat in the water to do acoustics, and that's something we're going 14 to try to get away from, but you run the risk -- you need to 15 calibrate anything you do that's cheaper with acoustics. Acoustics 16 17 is -- is some counting real things. You can use puffins -- that can be cheap -- you can use fish diets themselves -- at their --18 skim off charter boats, but one of the big problems in a lot of 19 20 work, it has not been a real hard standards. A lot of cheaper work 21 has been done with beta-acoustics or what was available, or with 22 counting the number of fish brought ashore on landings, or indirect measures, and I'm -- the world is now littered with dead fisheries 23 where people made short cuts and, so, what I'm hoping we can do, 24 and in this case -- we approved a lot of money so we could preserve 25 the acoustics this year, is make sure we've got good hard numbers 26

1 to compare the things with. Because if you make short cuts -- I 2 keep looking at the Newfoundland cod, where they did everything 3 right, but they -- did everything right, but they still made a 4 couple of short cuts, and so, -- that's was -- that's fine -- the 5 best science there is, and so we've got to do better than that.

6 MS. BENTON: So what year -- how many years out do you 7 get to before you have enough data to start implementing 8 (indiscernible - simultaneous talking)

I see sort of -- of the -- increasing of 9 DR. DUFFY: -- we junked products -- not junk products, we've mothballed them 10 -- projects de-active. After this first year -- some things you 11 just don't do it. Each year it will probably be fewer things. 12 13 What we want to do is end up for a core number of projects with at least five years of calibration of one to the other, so that you 14 15 can use puffins or pigeon guillemots -- pigeon guillemots which are obnoxious to work with -- you have to be sort of Indiana Jones and 16 17 the Wolenda (ph) Brothers, literally -- (Laughter) -- no, I'm not 18 joking -- you won't see me working on them -- maybe a great indicator because they do badly if they have to eat just demersal 19 They do well if there's pelagic fish around. 20 fish. But can we calibrate this against something -- against the pelagic fish. 21 That's the sort of thing we need to do. It may turn out to be the 22 23 first year that they're just so difficult to work with, and the 24 puffins -- if we can get enough puffin data, then we can just switch to puffins. It's really -- it sort of -- it's an adaptive 25 process, basing year-by-year what the results are, and what they 26

look like they will be in the future. If suddenly it turns out we 1 have the most awesome study, but we just need thirty years, you 2 know, that -- no matter how awesome it is, it's not -- doesn't seem 3 like it's going to fly. So, it's going to be a tapering down to --4 I don't have no idea what numbers, but to core set of -- sort of 5 probes that you can use to get a relatively good idea of what's 6 happening to the birds, and we hope to predatory fish and to the 7 things they feed on. 8

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MR. McCORKLE: Dave Cobb.

Yeah, one thing I heard you mention that MR. COBB: 10 I was very encouraged by, and that's the use of local knowledge, 11 and that's always been a sticking point in -- with me, and a lot of 12 people in the communities of Prince William Sound. These projects 13 don't use a lot of local knowledge and local people. These people 14 have been there all their lives, and I certainly encourage that and 15 would encourage other ones -- other investigators to use the same 16 approach. 17

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MR. McCORKLE: Thank you, Kim.

19 MR. BENTON: I'm sorry, I'm still a little confused. 20 Speaking an awful lot about the data collection, and where I get 21 confused is when the transition is able to make -- be made to use 22 that data to enhance the population of those things.

DR. DUFFY: Okay. To -- to be real blunt, I'm not sure that at the end of this we can tell you how this is going to help. That may be sort of a heresy -- in other words, if it turns out that, so much the earlier presentation -- it may turn out that

1 pollock is basically junk food, and you're not going to get 2 recovery as long as you're knee deep in pollock in the system. So, we may to be able to give some sort of answer about what is -- is 3 4 wrong with the Sound, but we may not be able to help you -- well, there's some obvious things you can do at that point, but I don't 5 6 think that directly we're going to, you know, say, ah, well, if you just change the nest sites you'll have -- be knee deep in marbled 7 8 murrelets, or you'll have a strong recovery of pigeon guillemots. It -- this project, in some ways, if you can imagine it were --9 should food is not a problem, it's perhaps predation is, then there 10 are some things that can be done about predation. But, if food is 11 12 the basic problem, you're talking about an ecosystem level problem and manipulating the ecosystem, and we had that discussion earlier, 13 and maybe, you know, you want to go out and over fish pollock and 14 bring back herring and capelin, but that would be -- be fairly 15 16 arrogant to say -- I would be afraid to guarantee results, at least 17 based on what we know now. Sea birds are not really easy to 18 manipulate. There are things you can do to -- you can remove predators from that site, but that's not going to help us if food 19 20 is the problem and not predation. You can improve nest sites, you 21 can reduce human hunting and disturbance, but that seems to be 22 relatively low right now. There is no evidence of other -- even 23 ticks you could probably spray for ticks, but I don't -- you just 24 introduce all sorts of things -- chemicals into the Sound, just where you don't need them. So, my -- I guess, my feeling in some 25 26 ways, this is a long-term understanding that we need of the Sound,

and if, by looking at the forage fish and the things that feed on them, this is going to give us a longer term -- the basic science you need to manage. It's not going to give you the management directly, or at least if it is, it's going to come out in ways that aren't clear right now. I may get shot by Molly for that, but that's ...

DR. SPIES: I just wanted to add that I think the 7 8 major opportunities, well in this area-wide fisheries management, and herring is a forage fish that is harvested and regulated, and 9 10 just using the example of what might be done that's occurring right 11 -- this year in Prince William Sound is the large pollock fisheries 12 as a result of the discovery of predominance of pollock, as a major component in Prince William Sound to the extent we didn't 13 understand before. Gary Thomas and others in the Prince William 14 Sound Science Center, through their work in the SEA plan last year, 15 16 documented large -- large schools of pollock, and there's a major 17 fishery going on there this winter, which have local economic 18 benefits as well, but whether that will result in a switching back 19 of the system, some kind of quasi-state that favors fattier foods that are better for sea birds, and I think I would agree with you 20 that it might be a little arrogant to make any predictions along 21 22 those lines, certainly, the experiments being carried out right 23 now.

MS. BENTON: I'm just trying to get a real basic link to restoration, and that's what these dollars are supposed to be spent for, and what I'm understanding you to say is, we may spend

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a million, you know, three -- whatever it is this year, we may
 spend nearly two million next year, we still won't have gotten any
 closer to the restoration.

DR. DUFFY: Well, yes you -- because the other --4 5 there's another issue of what are you restoring to, and you're --Prince William Sound is not staying still. There -- it's sort of 6 like one of those weighs -- the oil -- the two different oils that 7 8 are flowing through a these parts of waves -- I (indiscernible). There are a whole bunch of things that are passing through the 9 10 Sound at any one time -- perturbation -- and my, I guess, my argument would be until you understand those perturbations, you 11 12 don't know what you've restored to. You don't know what the past was, and you're not going to be able to really get an idea of 13 what's healthy for the Sound. We could probably manage, you know, 14 15 I could probably manage the place for years, maybe. Maybe you 16 could go ahead and put an artificial nests sites, but that may not 17 be -- and then change the Sound -- I think murres are a bad one --18 but a puffin. You could probably the place with a sufficient large 19 amount of money. At two-something we won't really know what is its 20 function, what's a normal situation for the Sound.

MS. BENTON: But, I'm asking, what is restoration -it's here. What I'm missing is I know that you need to get the base line information, or the existing information. The recovery objective is to get the population trends increasing, and that's in the Restoration Plan, and to conduct research to initiate the state or accelerate recovery. The studies that you're doing this year

and next year, how does that do that? How does it reach that goal? 1 Basically, that tests whether food is the 2 DR. DUFFY: problem, and if it is the problem, then there's a limited number of 3 option we can use to address that, deliberately over-fishing or 4 manipulating fish stock. If it turns out food is not the problem, 5 then we can go on looking at things like predation, disease, human 6 and see which of those might be 7 disturbance, restricting development. So, we basically ranked a variety of hypotheses about 8

9 which factors are affecting sea birds, preventing recovery, food
10 seems to be the most important one.

11MR. McCORKLE: So, for ten million dollars, you get a12pollock in a poke. (Laughter). Dr. John.

DR. FRENCH: Yeah, Dave, you may want to put your 13 14 transparency back up, because basically what I'm asking you do is to reassure me that this isn't just an academic number crunching 15 16 exercise. That one -- yes. (Overhead is displayed) This "Lean Cuisine" hypothesis seems to be very popular, but I don't think it 17 would stand up to FDA scrutiny with the new nutritional labeling. 18 The fact is, that the highest oil content of a pre-19 (Laughter) 20 spawning pollock is higher than the lowest of a post-spawning herring. 21

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DR. DUFFY: Uh-huh.

23 DR. FRENCH: And, therefore, when you sample, where you 24 sample -- because you get variations of about three-fold, a factor 25 of three in the lipid content of herring across the North Atlantic, 26 for example, for the food herring fisheries -- how do you assure that the numbers you're measuring for the approximate analysis of the caloric content of those fish are indeed reflective of the times and geographical locations that they're being -- that the predators are eating them?

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5 MR. DUFFY: Oh, thank you. You've actually made my 6 point. We'll be collecting fish from the same place as we're 7 seeing bird foraging, we'll be collecting fish that birds have 8 brought in. So, it's not completely separate from -- it's not two 9 separate lines, they will be very tightly linked.

DR. FRENCH: Okay, and you're not going to be using your sand lance numbers for the Barrens for your Prince William Sound herring.

MR. DUFFY: No, no. We'll be -- Barrens sand lance and we'll be looking for the differences with -- and that may be another story in itself that -- that the condition of fish in the Barrens is much better than Prince William Sound.

DR. FRENCH: Well, I mean, it's already known that it's highly variable, and the question is how you're going to use this in terms of quality assurance of your overall flow, I mean, yeah, they recognize that it is, and as long as you're sampling from the locations, when you start to talk about using a lot of acoustical data to locating forage fish, I've never seen an acoustical instrument that measured core content.

24 MR. DUFFY: Ah -- but we're going to have two boats, 25 one of which is going to fish -- clean up after the acoustics, and 26 -- I could go on for hours ... 1DR. FRENCH:What you're -- you're basically going to2provide direct quality control on you acoustics.

3 DR. DUFFY: We're going to -- but it needs to be 4 proved. We can identify different school sizes and concentration, 5 and you can also tell species, but we need to prove that by direct 6 sampling and so that will give us an acoustic target, and then a 7 boat will come in and try to tell the same thing.

8 DR. FRENCH: I think I know the answer to my question, 9 but I'll go ahead and ask it any way. If you can get all that data 10 from direct sampling, do you need the acoustics?

DR. DUFFY:

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DR. FRENCH: ... because you've already stated that it's very expensive.

Yes.

MR. DUFFY: If you -- might be able to eventually -actually your shooting blind if you can go out and just fish, that would be the most expensive way of all, because, I think ...

DR. FRENCH: There's a lot of ways to locate fish without acoustic surveys, but at any rate, but go ahead.

This is another hour long discussion we MR. DUFFY: 19 (Indiscernible -- simultaneous talking) Ι could have in a bar. 20 quess the idea is that there are fish -- some fish that you can --21 you need to know what fish are really out there, and how many of 22 those we can identify, and how many of those we can actually get in 23 In other words, there are things like sand eel, can we the nets. 24 really get those, or they tend to be lower or more disbursed, so 25 there are certain targets that we find are difficult ... 26

1DR. FRENCH:The answer to the question of any net2design is yes, but you already know that.

3 DR. DUFFY: Well, we wanted to nail it down. So, I 4 guess it's just a matter of using both and trying to correlate as 5 many things as possible, and then eventually ending up with the 6 cheapest and easiest method. Again, just assuming that one single 7 method works -- fisheries biology is littered with ...

B DR. FRENCH: Can you prop that thing up so I can see if
9 there's a feedback with the bottom of your fish box.

10DR. DUFFY:I wouldn't take that as gospel, there's11all sorts of back channels and lines here.

12 MR. McCORKLE: Is there a comment from Molly McCammon, 13 please?

MS. McCAMMON: Mr. Chairman, I wanted to emphasize that 14 15 when this project came before the Council at the end of March, and as they discussed it, there was some -- I don't know if I'd go so 16 far as to call it skepticism, but there is a certain amount of risk 17 related to this project and its ability to basically prove up what 18 it's attempting to prove, and for that reason, the Council only 19 20 agreed to fund this summer and fall's portion of the work, and they 21 decided to defer any further action on this project until probably November or December. So, future funding of this project will not 22 23 be taken up by the Council at their August meeting. They want to 24 see the results of this first season's effort, have an intensive 25 workshop on that in the fall, and then re-assess, and decide at 26 that time where to go with it in the future. So, the kind of

commitment that they have given it is only a one year, one season
 commitment at this point.

MR. McCORKLE: Any further comments for ...

MR. LOEFFLER: I do.

MR. McCORKLE: Yes.

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I want to start thinking about the 6 MR. LOEFFLER: 7 question, since it isn't -- I think it will really be useful, and 8 I think that Kim was good enough to talk about the benefits to restoration question. I think she did a real good -- that 9 10 interaction was very helpful. I'd like to focus for a second on the clearly defined objectives and end points, that is, is it clear 11 what the project will produce and when it will be done? So, that 12 13 is -- if I had to use an analogy, again from my training, if you had in five year -- how to define in twenty-five words or less, 14 15 what end point is. This is a five year project, and in five year 16 project -- in five years knew how it will have produced a monitor, 17 you have proved or disproved some of the hypotheses -- what you're 18 producing end point -- I'm sorry, that's the objective -- proving 19 or disproving the hypothesis, it will take five years and at the 20 end of five years, you'll require a long-term monitoring program to fully confirm or disprove them. Is that accurate? 21

22 DR. DUFFY: No. Well, it's sort of the 23 (indiscernible) that you get 95 percent of the answer with five So, if you -- if you wanted an absolute 24 percent of the funds. answer to this, we'd have to go on for ages. 25 But, my belief is 26 that after five years we will have very good tests of the main 1 | hypothesis from this study.

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MR. LOEFFLER: Food limitations.

3 DR. DUFFY: Yeah, and we will have sort of rules of 4 thumb or sort of simple operating models that can then evolve into 5 monitoring projects. So, that there are certain things that say we 6 believe there is strong relation between X and Y, but measuring X, 7 which is the immediate thing to monitor, gives you a good index of 8 Y, which is very expensive or very difficult to monitor.

9 MR. LOEFFLER: Okay, so the five year intensive in order to -- to give you answer and provide a cheaper monitoring program. 10 I want to go to the third question, cost effectiveness. In -- and 11 12 I don't make -- it's not my role to make a judgment is it cost 13 effective or not. I want to -- what I want -- is it possible to 14 spread these questions out over a longer period of time, than it is 15 to do periodic monitoring in order to come up with the answers to 16 your questions, prove or disprove hypotheses at a lesser -- maybe 17 the same ultimate cost but at a lesser annual cost. That is if you 18 spent ten million dollars -- you spent ten million dollars over 19 fifteen years rather than five to come up with the same answer to 20 test the same hypotheses.

21 MR. DUFFY: No, because -- well, my thing, is that you 22 have two steps to the hypotheses scheme. There are some of these 23 that are intensive and you're basically setting up a longer term 24 calibration, which is cheaper and designed for longer term, so that 25 if we're interested in inter-annual variation, you might for the 26 first couple of years look at it very intensely, and then get some

1 key things that you can go on almost forever, maybe see some 2 temperature off of a buoy and it's relation to a puffin diet, that may tell you 85 percent of what you need to know well into the 3 4 future. The point is there that, and this is the thing that really is the grave yard for fisheries biology that I keep coming back to, 5 people have made these shortcuts and, you know, you make 6 7 (indiscernible) assumptions about numbers and it's not based on 8 good science, and pretty soon it catches up to you. So, that's where -- I'm not -- this is not designed to be an open-ended 9 10 science project, you know, full employment for scientists, but there has to be enough of an effort to identify certain things that 11 12 are variable enough so that you -- you can see trends, or -- and 13 avoiding things that are way to valuable, or things that have no 14 variability, focusing on those things that are variable -- sort of 15 middle variability, and then have links to things you're interested 16 in, in the ecosystem.

17 I guess I understand the answer. MR. LOEFFLER: Okay. 18 One last question and, to beg the indulgence of the PAG for a 19 moment, and that's to go back to the financial stability question, 20 and that is to the extent that you are setting up a monitoring 21 program, which by its nature must go into the reserve, how -- it's 22 important to have some order of magnitude idea of how much of the reserve we're likely to be requiring, so that it's -- even 23 monitoring program, and I know you can't answer this, you know, the 24 25 cost to the penny, or maybe even to the hundred thousand dollars 26 now, but is a monitoring program likely to be a million in a year,

1 or -- or \$50,000 every four years, or to an order of magnitude of 2 monitoring that you can imagine ...

It's a real thumb suck. I would think the DR. DUFFY: 3 upper bounds would probably be \$200,000 a year, at most, but that's 4 giving myself a lot of -- of room. You have -- say, we ended up 5 doing a monitoring of diets of predatory fish, the -- the trial for 6 that is now \$15,000. If we were to do all the ports in the area, 7 that might end up with \$25,000 to \$30,000, with that analysis. 8 Double that -- \$60,000. Fish and Wildlife if they continue --9 assume they continue their monitoring of kittiwakes, and you can 10 tie a couple of other measurements to that productivity of 11 kittiwakes, roughly -- that's probably a fair -- comfortable 12 margin. 13

MR. McCORKLE: Gentlemen, this esoteric discussion is 14 thoroughly delightful, really. I think not at the present moment. 15 I would like to thank you for -- and don't go away, you're not done 16 yet -- thank you for a discussion and presentation that was not 17 only entertaining but educational. We enjoyed you thoroughly. I'd 18 like to ask the PAG if there are one or two questions more before 19 we close out this section, because we do have a whole lot more to 20 go to, so don't go way, but we are drawing to the close of this 21 section, so -- you have the this floor. 22

23 MR. BECK: One more observation -- a quick one 24 though. I think the questions being raised regarding this program 25 are intrinsic to all the science that's being done? That may a 26 crude observation, but my sense is all the science has to do with

1 the first down payment on -- based on the assumption of a long-term 2 understanding the ecosystem is necessary for restoration, and almost none of these programs are going to yield near-term 3 4 restoration management actions in five years, and therefore, what 5 I think we ought to do is -- is maybe jump into the -- the third of our three presentations, and then as a group talk about that 6 7 philosophy, that policy, and see what our thoughts are on that. To 8 me that's a critical subject, and I would really like to grapple 9 with it as a group.

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MR. McCORKLE: Pam, do you have more?

11 MS. BRODIE: A number of us are struggling with this 12 question about how the science connects with restoration, and I 13 would like to pick up on something Chris just said about it might take five years of studying before anybody can figure out whether 14 15 there can be any restoration. I'm not sure I'm paraphrasing it 16 quite correctly, but we should remember that five years from now is 17 eleven years after the spill. My question is, you have several 18 times in your presentation held out this scary model of the 19 Newfoundland cod collapse, which is indeed a catastrophe, and, in pretty much the East Coast, the Atlantic fisheries are a 20 21 catastrophe. What you've said, the science there was really great, 22 but something was missing, and so they had this catastrophe. What 23 was missing from the science there that we need to do here to make 24 sure the same thing doesn't happen?

25 DR. DUFFY: That's -- well, bluntly, someone mis-26 estimated the predation relative to the -- the technical question
is someone was off by factor of two in how much you could take out
 of the fish stock. They were taking twice as much as they thought
 they were.

MS. BRODIE: You mean there weren't really as many fish as they thought (indiscernible)?

Yes, and there was a case -- that was a MR. DUFFY: 6 case where the data wasn't quite there, there was a range of 7 8 variability, and each time it came time to choose, someone choose the nicer number, and over time, the nicer number got nicer and 9 nicer, and they suddenly were taken humongous portions of stock, 10 where they thought they were being conservative, and there was no 11 one out there -- there was no real reality check, and that's -- in 12 fisheries science you need all the reality checks you can get 13 because this is -- this is a political thing. The scientist didn't 14 want to give bad news to the fisheries minister, and the fisheries 15 16 minister -the ex-fisheries minister now which is (indiscernible). 17

Thank you for the correct answer. MR. DENNERLEIN: 18 Yeah, so ... 19 DR. DUFFY: But that's as much as management as it is DR. SPIES: 20 science. 21 Well, it was -- the science was DR. DUFFY: 22 Thinking of -- thinking of the nice 23 DR. SPIES: 24 number. But, it was the scientist didn't have 25 DR. DUFFY:

26 quite enough different sources to really, you know, stick to their

1 guns, or to -- they wimped out. And, my real concern is that ... 2 DR. SPIES: But multiple answers though are common in You look at the Kenai fishery and try to fisheries though. 3 forecast what's going happen next year, I mean, you basically --4 there are three different measures and they're all over the board. 5 6 DR. DUFFY: Well -- so you need those three measures, though, at least in this case they were sort of focusing on the 7 8 best measure over time, and that's, I quess, what I don't want us I'd like to have that range until we know which ones are 9 to do. 10 the best or which ones are the least biased. MR. McCORKLE: Pam, a follow-on? 11 Well, just -- certainly, we're 12 MS. BRODIE: all concerned about fish stocks in Alaska, that is -- it's the regular 13 14 management job of the Department of Fish and Game to pay attention 15 to the populations of fish stocks all over the state, not really 16 oil spill fishery problem. 17 MR. McCORKLE: Molly. I think, Mr. Chairman, just to kind of put 18 MS. McCAMMON: this in a real simplified way, I think what the forage fish project 19 20 is trying to do is, first of all, find out is food the limiting factor for the recovery of these sea birds. That's just kind of an 21 overall question. Secondly, can they develop a management tool, 22 23 which in this case I think is that inexpensive way of monitoring 24 what's happening between food and birds, and this -- and if they 25 can after five years and lots of money, this will be, maybe 26 something very useful that -- not necessarily to be funded by the

1 reserve, but maybe as ongoing management by the regular agencies.
2 That will be something really valuable that oil spill money could
3 have given to the agencies for these resources. So, I think there
4 is kind of these dual purposes here that should be clearly laid out
5 so that you can track and at the end of five years say, you know,
6 were we successful or not.

7 MR. McCORKLE: Well, the final point the Chair would like 8 to inquire, you made a statement that sort of caught my ear, and 9 I'm not sure I got it correctly, but I think you said we could do 10 95 percent of the research in five percent of the time if we only 11 did so and so. What was that?

DR. DUFFY: I may have sort of mulled (indiscernible simultaneous talking). No, no, there's a -- make it right or -you did the last five percent of anything you try to do takes 95 percent of your fund.

MR. McCORKLE: Oh, that's what you said.

17 MR. DUFFY: Or, maybe you've gotten half that, not the 18 ...

MR. McCORKLE: I think I misheard.

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20 MR. DUFFY: So, what I've tried to do is just spend 21 five percent of your funds.

22 MR. McCORKLE: Well, I again think it's time for us to 23 give you our thanks and to -- you too, Bob, for letting us sort of 24 intervene a moment or two ago. We do want to -- to hear Mr. 25 Bodkin, is he still here? There he is, okay. Can we honest to 26 goodness take five minutes and get back so we can go at a quarter to four. We're going to have to go past 4:30, a few minutes
 because we started late, but we want to -- unless we have a portion
 of the discussion that Chris wants to lead -- so, let's take just
 five minutes, and please hurry back.

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(Off Record 3:40 p.m.)

(On Record 3:45 p.m.)

MR. McCORKLE: Thank you very much. Ladies and gentlemen
we can continue now with Dr. Jim Bodkin, nearshore vertebrate
predators, which is a favorite topic of Chris's.

10 MR. BODKIN: Thank you very much. I'd like to thank Bob for moving this to the final presentation because we really are 11 12 qoing to shift gears, at least conceptually within -- within an ecosystem. I'd like to define the nearshore -- I'd like you to 13 14 think a little bit about the nearshore ecosystem, and how you might define it. For this project, the -- one boundary is fairly easy, 15 16 it will be the upper intertidal area, and so you can define the nearshore area, and it would go downward from that into the marine 17 environment, and it's defined on this outer boundary by somewhat 18 19 more fluid boundary, that's probably related to depth and distance 20 from the shoreline. It differs from the pelagic system that we've 21 heard about recently in two fundamental ways, one of those being 22 the source of primary production. In the pelaqic system, it's 23 phytoplankton, and in the nearshore system, it's benthic algae, 24 algae that are attached and grow from substrate, and it's the, kind 25 of the primary difference in a source of carbon into the system, although there is some exchange, obviously. And, as a result of 26

1 this depth constraint to the nearshore, you can think of space as 2 limiting. In other words, there are substrate in the nearshore area that plants and animals grow on. In the pelagic system, 3 you're somewhat free from that -- that constraint, and as a result 4 5 of this space limitation, you end up with competition resulting in structuring the communities of plants and animals that we find in 6 7 the nearshore. Now, there were two direct effects of the oil spill 8 on the nearshore, and one of those was the mortality of the plants 9 and animals that lived there. And, subsequent to that, there was a falling of that, that resulted in changes in the -- in the 10 processes that structured, such as competition. 11 In other words, the oil spill came in, it killed a lot of plants and animals that 12 13 lived in the area, and as a result things changed into the future. At that point in time, the competitive processes that were 14 responsible for what was there at the time of the spill become 15 16 modified. The plants and animals that live there and their 17 relative proportional abundance to one another is changed. Now, the primary purpose of the NVP projects is basically to describe 18 19 the state of recovery of the nearshore ecosystem and, in doing so, 20 if we identify that the nearshore ecosystem has not recovered, we'd 21 like to identify those processes that might be limiting recovery, 22 identify potential actions and, therefore, that might be 23 facilitated -- that might be undertaken that would facilitate Now, the slide that was lost in our technical 24 recovery. difficulties, 25 identified our cooperators. Because of the 26 complexity of the system, the variety of taxa that occur in the

1 nearshore system, we've compiled a group of specialists, probably 2 half of them you might consider invertebrate ecologists, or in marine invertebrates, marine 3 specialists nearshore 4 invertebrates, and the other group you might consider as a specialists, including several mammalogists vertebrate 5 and ornitholgists. But, anyway, they include a large number of members 6 and I'd like to recognize them all -- the slide is sitting on the 7 8 desk -- (laughter) -- we're going to miss that part of it. Now, 9 I've been thinking a lot about how to try to present this to you, 10 and, like I said, our quest here is to describe the state of 11 recovery, and I'd like to give you an analogy, and think of a physical examination of a human, you know, we've all had them, and 12 a multitude of measurements are taken on a variety of different 13 14 systems within this -- each person, in the process, including, you know, your circulatory system, your respiratory system, your 15 16 nervous system. They take -- we take measurements, blood pressure, 17 vision, blood chemistry, and all of these different measures are used to evaluate the health of the individuals. 18 Now, if we 19 considered the nearshore ecosystem as an organism, consisting of -of different functional systems, we can apply a similar approach in 20 21 examining and evaluating the health of the nearshore ecosystem. Now, the question then becomes, what measures can we make and how 22 23 can we compare those so that we -- so that we can assess the health 24 of system that we know was perturbed six years ago. So, that's the questions that we're going to try to ask. I'm going to try and 25 26 take that approach, where we look at a variety of different

1 measures of the nearshore ecosystem. Now, when we began this 2 project, we had a -- a wide variety of species that we potentially 3 could look at, the number was almost limitless in terms of injured resources. However, it was decided that we should concentrate our 4 effort on invertebrate predators -- or on the vertebrate, the large 5 charismatic mega fauna that were injured -- the sea otters, the 6 7 harbor seals, the number of bird species that were injured. So, we went into a process of specie selection, and basically there were 8 9 two criteria for -- for selection of a species for inclusion into 10 our measures of -- of the health of the nearshore ecosystem, and 11 one of those was that it had to be economically important. And, it 12 had to be economically important in either a commercial, a recreational, or a subsistence sense, it really didn't matter. And 13 -- or it could be ecologically important, and in some cases, you 14 15 know, there's a wealth of information on sea otters that describes 16 their importance within the nearshore system in structuring 17 communities. And, then we had to select, I guess the other 18 criteria for selection of -- of the species was that there had to be evidence that it had not recovered from damages incurred from 19 20 the spill. Okay, so we look at the -- at these vertebrates, but 21 they're just one component of this -- of this system, and another 22 large component of the system are they prey species. These animals 23 feed on organisms that live in the nearshore system, including both 24 fishes and invertebrates. So, this is a -- basically a matrix of 25 the -- of the selection of the species that were selected for the 26 reasons I just provided, and they separate out into two birds and

1 two mammals and two fish eaters and two invertebrate eaters. So, 2 we have a division here that may -- may provide some -- some insights into, let's say, pathways that these animals use, not only 3 in terms of what their eating, but also differences between birds 4 -- I'm sorry -- what we'd like to see is -- we have differences 5 between the fish eaters and the invertebrate eaters, and then we 6 make the differences as a result of metabolic differences in the 7 way that -- that these animals are digesting and processing their 8 9 food. (Points to slide illustration). This is the area that we're 10 proposing to work in. (Aside comments on clarity of overhead). 11 This is -- this an area that was likely the most heavily influenced by oil. Oil was heavy in this area, and persisted over long 12 13 periods of time. It's one of the areas where, if we're able to document persistent declines or lack of recovery of some of the 14 vertebrate species that we're going to be looking at, it's within 15 16 this area. As we move out into the larger spill area, our 17 abilities to describe continued decline or lack of recovery becomes 18 masked by spacial differences in the -- in the degree of mortality. 19 In other words, large -- a large proportion of the animals, and the 20 sea otter in particular, in this area died. As we moved out of the 21 Kenai Peninsula, a smaller proportion died. But, it becomes more 22 difficult to -- to monitor the process of recovery because fewer --23 a smaller proportion of the animals died in this area. We have 24 four species of vertebrates. We were unable to locate two areas, 25 one oiled and one oiled, where -- that we could have a common study 26 site, simply because there wasn't the overlap of the -- of the

1 presence. We needed pigeon guillemots, rookeries, and then the presence of harlequin ducks, sea otters and river otters. 2 So, we have two areas here, this is a common area, the oiled area, and 3 then we have two un-oiled areas that we'll be comparing our 4 measurements to, and for this area we'll have a pigeon guillemot, 5 6 rookery and river otters, and for here this is where we'll compare 7 sea otter and harlequin duck data. If I could give you one example of the data that we have to evaluate recovery, two data points 8 9 prior to the Exxon Valdez oil spill. This was Area N, basically 10 this area here that I talked about previously. Two separate counts 11 done by different methodologies and we could talk a lot about the -- the qualifications going along with these data points. 12 Nonetheless, they're all we have -- 250 to 300 sea otters in that 13 In 1989, we took out 182 animals out of that area, mostly 14 area. 15 carcasses, about 25 or 30 of those were animals that were 16 rehabilitated, and their fate is unknown, but that's some we 17 removed. During the past three years, we've conducted, again, another survey using a different methodology. These are our three 18 19 estimates. We don't have clear evidence of recovery in this area, that's the data that we have suggesting recovery is not occurring. 20 Okay, some of our general objectives -- I think this speaks to the 21 22 overall objective of defining the status of these injured 23 populations, and we're going to do that again -- how -- in several 24 different ways. We want to determine if recovery of these predator 25 species is constrained by simple growth rate. In other words, have 26 the populations, the separate -- the mortalities -- have they

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continued to grow, but at a slow rate, so slow that we can't detect 1 2 it, or hasn't -- it hasn't occurred yet, simply because they can't grow fast enough. It will take -- it will take ten years or twenty 3 years instead of the six that we've occurred -- that we've had 4 since the spill. And, then we want to determine, you know, if 5 recovery is not occurring, is it related to continued oil exposure. 6 7 We know that the nearshore area was a repository for large amounts of oil, and oil remains in the nearshore system. 8 And, also as I 9 said earlier, because of the changes that occurred in the structure 10 of the nearshore communities, it's possible that there -- that the 11 recovery of these species is constrained by food availability. In 12 other words, there could have been direct damage to prey 13 populations, the invertebrates that the animals are eating, or the 14 fishes, or it could have been community level changes that resulted 15 in fewer preferred prey, or less available prey to the predators. 16 Well, these are the questions that were asked though. I should back up just so you don't get far ahead. So the first year of our 17 18 objective is to determine the state of recovery. We want to do that through measures, and again, they're multiple measures that 19 20 we're going to take are primarily of three types, one of those being health, that would include individual health of animals 21 22 including analysis of the immune system functions, of blood 23 chemistry, morphometries, direct measures of the animals 24 themselves, their size and basically how -- how the individuals are The second -- well, there's three measures, one of 25 performing. 26 them we're going to call health, the second one we'll call

1 demographics, and the third will be prey population or trophics. 2 We're going to measure health through hematology, immune function assays, morphometries, and for harlequins and pigeon quillemots, 3 body condition measures, and we don't probably want to talk too 4 much about that. I understand you've talked a bit about it this 5 6 morning, but some of this will require a collection of individuals. As a potential measure of oil exposure, we have cytochrome P450's 7 from ELISA (ph) assays of the pelage, which will indicate very 8 9 small levels of hydrocarbons on the pelage of animals, and if warranted, if we see levels of damage at the vertebrate predator 10 levels, we'll then have the ability to look at hydrocarbon levels 11 12 in the prey of those species that will be caught. So, this is kind 13 of -- just one approach to -- yes. MS. BENTON: There were several words in there I'm not 14 familiar with (indiscernible - simultaneous talking). 15 16 MR. BODKIN: I'm sorry -- I'm probably not familiar 17 with them. Cytochrome, ELISA and pelage. 18 MR. BENTON: 19 MR. BODKIN: This is an acronym for an assay for, I 20 believe uses as an alcohol swab to basically rub a pelage and then 21 that swab is analyzed for hydrocarbons. 22 MS. BENTON: What is that -- a pelage? 23 MR. BODKIN: Bob -- Bob might be able to help me out 24 here. It's an anti-body based immune reaction. 25 DR. SPIES: 26 We'll be able to detect the presence of oil.

1	MR. BODKIN: The ELISA?
2	DR. SPIES: Yeah.
3	MR. BODKIN: And, I think Bob might be able to help me
4	out with the cytochrome P450's.
5	MR. McCORKLE: Or, Mr. French. Dr. French.
6	MR. BODKIN: Okay.
7	DR. FRENCH: Well, cytochrome P450 is an enzyme found
8	in livers of all vertebrates, it's found in most various species
9	and most organisms from yeast on up, but, anyway, it's involved in
10	it's various iso-forms in the metabolism of a huge variety of drugs
11	and foreign compounds. Specifically, the 1A's are involved in the
12	metabolism of various hydrocarbons, and the levels of those
13	monoloxygenases (ph) are actually elevated after exposure to these
14	type of hydrocarbons which induce the synthesis of those proteins.
15	MR. BODKIN: I apologize. I don't we have three
16	biochemist collaborators on the staff that provided me with this
17	information, and again it's a diverse group of people with complex
18	and diverse backgrounds, in areas of expertise, and this is not
19	mine. If you haven't gathered that yet. But, anyway, I guess I
20	wanted to point out here that this is again, one of one of the
21	group of tests we'll be performing on the nearshore system to to
22	access the health of the system. Another one, now this one I can
23	probably answer some of your questions on. The demographics, and
24	these will include things like estimates of abundance, or indices
25	of abundance; how many animals occur there and reproductive rates,
26	survival rates, and these will vary amongst species based on

logistical considerations, what can we do, you know, economic 1 2 considerations. We can measure survival of sea otters, it costs several hundred thousand dollars a year. And, ecological 3 consideration, each of these animals have different life histories, 4 and so in consideration of those, which ones -- which demographic 5 most efficiently and effectively. 6 measures can we make Reproductive success to use for sea otters and pigeon quillemots, 7 8 while at the same time, over-winter survivalship will be used as a 9 demographic measure of harlequin ducks. Trophic -- trophic issues, I had an overhead -- due to the complexities of switching over, I 10 think I'll just avoid it. But, two things we're going to do with 11 12 trophics, one of them, we're going to look at the -- look at the 13 prey of the injured resources of the vertebrate predators, and evaluate the prey, the availability of preys, the abundance and the 14 15 size class distributions of those prey in these two different 16 areas, the oiled and the un-oiled areas. We use that to answer the question is -- is prey limiting these two different populations, or 17 recovery of the oiled population. There's another thing that we're 18 19 going to be able to do with this information, and it'll be able to look at -- again, measuring the recovery -- the example I'll give 20 21 you is sea otters -- in that sea otters, the density of sea otters was reduced in this area and it appears to be -- remained reduced 22 23 over the past six years. As a result, we can predict that size class distributions of their favorite prey should be growing. 24 We 25 should see a shift to the right in the size class distribution of some of those prey, in particular mussels and possibly clams. 26 So,

we can go in there with that, a priority hypothesis and measure and compare these -- these populations. If they -- if they do in fact differ and the clams, mussels, are larger in Area N, where the sea otters have been reduced, we'll have evidence, again, additional evidence that recovery has not occurred.

MR. DENNERLEIN: Can I ask you a question? MR. BODKIN: Sure. MR. DENNERLEIN: Area N is quite large.

MR. BODKIN: Yes, it is.

My experience with sea otters is 10 MR. DENNERLEIN: 11 quite limited. With that caveat, however, most of my experience 12 with sea otters is that a large -- as sea otter populations expand or migrate or establish the range, they usually move into the bay, 13 they have a somewhat population explosion, and then, you know, 14 there's no longer 45-50 sea otters in the bay, we're down -- you 15 know, twenty sea otters, sort of take up residence, and somehow 16 17 there's a, you know, there's -- there's at least some dynamic equilibrium, or low density dynamic equilibrium that's established 18 in the bay over time. 19

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MR. BODKIN: Right.

21 MR. DENNERLEIN: Are we picking bays? I mean, to know 22 that -- that there's a change to the life in the size distribution 23 of clams or the environment of sea urchins or something in the bay, 24 you'd want to know that you went to a bay in which sea otters were 25 fairly, you know, sedentary, that this was their territory, and you 26 were fairly sure that over the last six years, this was a home base for sea otters. That's -- that's a very large area. Are you
 picking very specific bay -- bays and home ranges?

Let me answer the question. We are -- we MR. BODKIN: 3 are selecting sites within here. One of the -- one of the designed 4 constraints of our project is that we won't be able to make 5 inferences about the universe, because we are selecting sites non-6 randomly. We recognize the limitations of that. We also need for 7 you to recognize the cost limitations and the design limitations 8 and inference limitations we can make by -- through a random 9 sampling program, on a scale such as this. Does that answer that 10 question? 11

MR. DENNERLEIN: Yeah, I guess it does, but I'm -- in order to know if the size of prey is -- is expanding, I want to know ...

MR. BODKIN: I'll address that question.

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... that the population -- I mean, MR. DENNERLEIN: 16 you know, literature search or in a local knowledge search or any 17 combination of things that aren't expensive, for instance, you 18 could go to Southeast and you would be able to track that, you 19 know, no sea otters, 50 sea otters for a few years, 20 sea otters 20 become a stabilized population in LDEE -- next bay, up the coast, 21 50 sea otters, you know, that sea otters have repopulated, and I'm 22 just wondering -- I guess I (indiscernible -- simultaneous 23 24 talking).

25 MR. BODKIN: If you want to know the history of sea 26 otters in Prince William Sound ... MR. DENNERLEIN: Amen.

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MR. BODKIN: Okay, right.

MR. DENNERLEIN: So that you know that there's a real
-- there's a real correlation that these sea otters lived here for
awhile, now (indiscernible - simultaneous talking).

It's likely there was a remnant population 6 MR. BODKIN: 7 of sea otters that persisted -- they were near extermination in the 1800s in southern -- southern Prince William Sound, the exact 8 It was a relatively small number. 9 location is not know. The 10 earliest records are from early in this century of 50 animals 11 somewhere in southern Montague Island, but -- but -- and there's been good records of the tracking of the reoccupation of Prince 12 13 William Sound since that time, but there have been sea otters in 14 this area, at least up through here. It's likely that they moved into this area in about -- about thirty years ago. I would suspect 15 that they should be, in that amount of time, at or near an equal, 16 17 and the prey populations should be structured to the extent that they will be by the sea otters, and if the sea otter populations is 18 within Prince William Sound in 1989 were considered to be size 19 equilibrium density, and you're actually right. 20

21 MR. DENNERLEIN: (Indiscernible - simultaneous 22 talking).

23 MR. BODKIN: Right. What's happened, I mean what's 24 happened -- the way you describe this is -- has allowed us really 25 to quantify the effects of sea otters have. The fact that they 26 were exculpated from most of their range and then have subsequently

we occupied about 75 percent of it, has provided magnificent 1 2 experimental tool for us to describe what sea otters can do to communities, which is -- in a large extent provides much of the 3 framework for this study, particularly in the sea otter component. 4 Anything else? (Pause) A list of hypotheses, only because I have 5 6 felt compelled to include them here. But, basically, it's just simply, you know, the same questions that I've been describing and 7 talking about in a slightly different way, you know, that what 8 might be limiting this -- this population of sea otters, or of 9 10 these vertebrate predators, okay.

11 Now, I'm going to try to address some of the questions that 12 you might ask based on the past two talks. (Aside comments). Where are we going to go with this? I would like to say that if 13 after two years, let's think of these measures, and I don't know 14 how many there are actually, probably a dozen or two dozen 15 16 different measures that we're going to take on each of these vertebrate predators. I'm including the measures of health and 17 their measures of abundance, and their measures of their prey. 18 If they all turned up negative after two years, I don't think that 19 20 there's a scientist on our project that wouldn't be willing to say, your system recovered, it's time to go home. We -- we can't show 21 any damages here. I -- in fact, I went out on a limb and said two 22 23 years once, and they almost chewed me out, they said, we really 24 would like a third year, I mean, if things are -- if things are 25 going that good and it's recovering, let us make sure, and so, I 26 think they actually put in three years. But, I'd be willing to on

-- if everything turns up red after two years, these systems are 1 doing well, as well as we can determine. Okay. So, that would be 2 best case scenario, to send us home, or give us something else to 3 do. Now, on the other hand, a more likely scenario, we're going to 4 find that some measures turn up, light up, and others don't. 5 In other words, we're going to have some positive and some negative 6 results, and I think what that will do is it will allow us to focus 7 on what -- what processes or structuring -- which populations, 8 9 right. It's entirely likely that we may see recovery for sea otters and pigeon quillemots, but not for river otters and 10 harlequin ducks, as -- as just a hypothetical outcome. 11 In which case, we might say, okay, you've got recovery of these components 12 13 of the system, not -- we can focus our efforts on these. So, a steady design after -- after finding these positive and negative 14 results will be adopted, if we can adapt and focus on the positive. 15 And, most importantly, it will provide us with a (end of tape) for 16 17 restoration activities, and you can ask what those might be. If -if we have continued oil, okay, let's -- and the design should 18 19 allow for this, we have a measures of oil through the -- the cytochrome P450's and the ELISA and the immune response functions, 20 21 and so those light up for sea otters, and we find oil in their 22 prey. I mean, this is likely something that we're likely to find 23 because we know that there is oil in mussel beds, and it can be 24 cleaned, okay. So, there's -- there's the activity we can remove -- try to remove the mussels, replace the mussels, clean the oil 25 beds, if that's -- if that's the problem. There's a potentially --26

if in fact there's no oil, but the prey population are -- are 1 reduced, in other words, there's not enough prey and therefore, 2 again, you know, I'll use sea otters because I'm most familiar with 3 them, and I think that the potential restoration activities are 4 5 likely graded. You know, there's -- there's methods and means to provide mussel beds, you know, trans-location of mussel beds, 6 trans-location of clams, they can be put into areas, you could 7 actually try to -- try to create additional prey resources for --8 for sea otters. You might be able to do some things for the --9 10 some of the pigeon quillemots, maybe make better nests for them, more accessible nests for ornithologists, I don't know. But, any 11 rate, those are -- those are just a few of the things you might be 12 able to do if it turns out that you don't have recovery of some of 13 these -- these self-components of the system, and they're probably 14 others that I haven't thought of. 15

16 Now, in closing, I'd like to you to thing of something that --17 that I think is important, and it really doesn't pertain to this project, or -- or the forage fish project or the SEA plan, but it 18 has to do with all of them. And, you know, I've tried to describe 19 20 some of the distinctions between the nearshore system and the 21 pelagic system, and I think they're reasonable distinctions that 22 separate them out, but at the same time there's linkages to be made 23 between these systems. There's linkages to be made between the 24 nearshore and primary production in the pelagic realm, and -- and I think it's important to consider, not simply how each of these 25 26 projects are integrated within themselves, but how they can

1 integrate across the projects, and identify the linkages between 2 the different systems, between the forage fish, between the 3 nearshore areas, between sea otters and zooplankton, and larval salmon support systems. Again, that's kind of a larger picture, 4 5 that's really beyond what you guys are thinking about, but if you're talking about wanting to leave a legacy, to create a legacy, 6 7 that will provide, you know, knowledge well into the future, 8 provide a foundation, we really are in the forefront of -- of 9 describing an ecosystem science, and describing ecosystems in 10 process, and on a scale of this magnitude, it hasn't -- and with this degree of detail, hasn't been attempted before. So, you have 11 12 that opportunity. But, anyway, with that I'll close and deal with 13 questions. MR. MCCORKLE: Questions of Dr. Bodkin ... 14 MR. BODKIN: Mr. Bodkin. 15 16 MR. MCCORKLE: Mr. Bodkin, we apologize. Yes, Kim. 17 MS. BENTON: I have a guestion about guillemots because 18 you're studying them and the previous study is studying them, and 19 what difference in the (indiscernible) and if you're working 20 together, how that's working? 21 MR. BODKIN: Good question. We have a good answer for that one. Basically, it's the same people doing the same work, and 22 23 they're not charging you twice for it. Okay. 24 MR. MCCORKLE: Well, why not? (Laughter) Dr. John. 25 DR. FRENCH: Well, maybe Bob or Stan ought to answer 26 this instead. What, we have been talking about sampling, you know,

lethal harvesting of birds earlier, is there contracting people 1 2 (indiscernible) in this study? Is there some consideration to screening those samples while they're available and fresh? 3 DR. SPIES: Screen them? 4 DR. FRENCH: The bird samples -- the other birds that 5 6 are going to be taken by lethal harvest. I think those birds that we were going to 7 MR. BODKIN: 8 sample are the harlequin ducks or the P450 would have been sampled at the time that they were tested for trans -- or, transfer 9 10 (indiscernible - simultaneous talking). So, there was already a significant 11 DR. FRENCH: overlap in those two -- two groups of (indiscernible). 12 13 MR. MCCORKLE: Chip. 14 MR. DENNERLEIN: So, Ι understand Dr. French's question here, but the intertidal feeders, the turnstones and surf 15 16 birds in particular, are going to be sampled for -- because they would be -- I mean, were out there, and we're going to shoot some 17 turnstones, right? and ... 18 MR. BODKIN: 19 No. 20 MR. DENNERLEIN: Well, not you, but somebody is, and my question is somebody -- you know, these are birds that are walking 21 22 around in the intertidal zone eating invertebrates, and is somebody, while they're at it with the tissue, going to sample and 23 correlate so we get -- we're gathering as much cross-referencing 24 data as we can. Is that where you're asking? 25 26 MR. BODKIN: Yeah, basically ...

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1DR. BODKIN:Okay, and I was -- and I was interested --2I was going toward the harlequin ducks associated with this.

DR. FRENCH: Yeah, we're screening, you know, 3 for toxicological perimeters on certain -- certain species, and we're 4 taking others in addition, and they're living and feeding in 5 similar habitats, I think we'd be remiss not to also be looking at 6 those organisms. I realize it's not that inexpensive a test, but 7 8 we're already contracting presumably (indiscernible), anyway, We might, I think ... 9 whoever.

10DR. SPIES:The P450-1A assays are on peripheral11lymphocytes in the nearshore vertebrate predator, as least in the12case of the sea otter.I don't recall about the harlequin ducks.

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MR. BODKIN: I'm certainly they are consistent ...

DR. SPIES: Right, and that's a different assay with a different antibody. As far as the shore bird, it's a complete use of the shore bird samples, those are mainly going to be taken on northern Montague and -- and areas in the northern Sound that weren't oiled, so I'm not sure that there's much use of -particular question -- we might put them to great use, but I'm not sure we're gathering data -- different question in mind.

DR. FRENCH: So, okay, so there's really those herring spawn habitats that are going to be sampled, there really aren't any oiled examples within that sample?

DR. SPIES: Well, there was some oiled in the northern end of Montague Island, but it was fairly light compared to other areas on that island. MR. MCCORKLE: Chip.

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2 MR. DENNERLEIN: Question on recruitment. If one of the hypothesis is that it does not -- that the reason they're not 3 4 expanding the population is recruitment, and the parts of that, I mean, that seems obvious. If they're not recruiting into the 5 6 population, it's not expanding. But there's different parts of it, are you -- are you saying that we haven't, and I'm expressing 7 8 ignorance here, we don't have a study yet that looks at an unoiled 9 population, or a lightly oiled population over the last five years, 10 and an oiled population of sea otters, and simply compared surveys 11 and compared reproductivity?

12 MR. BODKIN: We have. We have two -- two years -- two different studies conducted over a three year period, looking at 13 basically reproduction survival -- age class zero sea otters, in 14 15 western Prince William Sound and eastern Prince William Sound, and 16 in both studies of survival was significantly lower in the oiled areas as compared in the unoiled areas, or the eastern versus the 17 18 western Sound, and its recruitment would be, at least up to that 19 point would be (indiscernible - simultaneous talking).

20MR. DENNERLEIN:So, part of your question, we have21some data on already ...

MR. BODKIN: Right, we do.

23MR. DENNERLEIN:... and that will be factored in?24MR. BODKIN:Certainly.

25 MR. DENNERLEIN: Is -- and the final, is there any 26 information on residual toxicity at low levels regarding

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reproductive capability? Is there any part of -- part of 1 recruitment in other -- and this is not oiled -- but, I know in 2 other populations, specifically in the southeast with chemical run 3 off on -- looking at gators and some other things that are going 4 on, was very small and minute amounts of residual toxicity are 5 affecting female reproductive organs in species. Is there anything 6 that's being looked at like that, that we would -- do we know what 7 8 the state of science and that would be something to learn from oil 9 spills, not only affecting recruitment, but in a larger picture, to learn about the residual effects on the reproduction of minute 10 Is there any -- is that part of the component? mammals? 11

MR. BODKIN: What we have from the past, and again I'll have to limit to sea otters, we haven't -- haven't had the ability to detect the effects of small amounts of hydrocarbons on reproductive capability in sea otters. Now, I'm going to ask Bob, I can remember some data from some sea birds that demonstrating very small amounts, again -- all right, I guess -- initially doses that had long-term effects and -- on reproduction?

Well, we've looked at that question in a 19 DR. SPIES: 20 number of different species, including harlequin ducks, and those -- that was the main central question of harlequin ducks. 21 There 22 was reproduction in the east, there wasn't reproduction in the The birds -- we still don't know the reasons for that. 23 west. 24 We've been able to show just within the last year, Dave has 25 collected in '93 that there's difference in oil exposure due to 26 this P450, and the birds on the west, in the oiled areas, have

higher levels of this enzyme which indicates they have high levels 1 2 of exposure to oil. Now, whether that is necessarily a link to the lack of reproduction, we don't really know because the baseline 3 data on reproduction in the Sound wasn't -- there was no published 4 papers, there was some, kind of -- anecdotal information on the 5 6 presence of small broods and harlequin ducks in those areas, and so, we still don't know what the -- how to end resolve that 7 8 question fully, and there are other species that we have looked at, 9 black oystercatchers. We studied reproduction of those, and there were reproductive differences, but we haven't showing a mechanism 10 of whether the oils really caused those and then compare -- again, 11 12 there was a comparison between Green Island and Montague Island on some of the reproductive success rates. And, of kittiwakes there 13 was also work on reproduction. So, there's quite a few different 14 15 -- this was just three examples -- quite a bit we've looked at. We 16 don't have a rock solid case that's really completely proven for 17 low level effects from residual hydrocarbons on reproduction.

MR. MCCORKLE: Chip.

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19 MR. DENNERLEIN: I won't belabor this, and I'm supposed to be the land guy -- I'm sorry to burden you with all 20 21 these science -- but the reason I ask in the broader question, we'll go to Mr. Loeffler's list of sustainability and things over 22 23 time and the most inexpensive way to do things, and I guess the 24 reason, this is just one example and it may not be the best example, I don't claim to be that well versed in this, but for --25 for example, you know, some of the most important studies that were 26

ever done in DDT were done with earthworms in a little bin in 1 Pertoxin (ph) and everybody turned them over once in awhile, and 2 picked up the earthworms and figured out they had residual DDT. 3 Acid rain studies were done with a bunch of black ducks in a pen, 4 you know, just dripped a little amount of acid into their water 5 dish. Is there any, does this tie into any sort of research that, 6 7 you know, some day somebody takes a couple of pairs of harlequin 8 ducks, and gives a couple of pairs some low level toxicity, and a 9 couple of pairs not, and puts them in a pen and watches them for 10 five years? I mean, that is classic sort of -- Stan, I know you're 11 familiar with this part of the world too, that's sort of classic, inexpensive perks along, Pertucsin (ph), some of the greatest 12 13 wildlife science in the world was done in that way, and we're --14 we're going all around, we're doing great things, we have acoustic 15 science, you know, we're all over the Sound with boats and teams and everything else, but I'm wondering if there's not an element 16 17 here where we -- where we bridge to some pretty simple on-going sustainable, inexpensive study that track, 18 in a controlled situation, the question of low tech toxicity on reproductive 19 20 organs, or things that we might want to know on the planet, if we ever incur, you know, other oil spills in other environments. 21

22 DR. SPIES: Well, Ι think there's a couple of 23 different ways to answer your question. First of all, there's 24 literature that already exists on the reproductive effects of 25 hydrocarbons, and it's fairly extensive. The problem with that literature in terms of this particular oil spill is that the 26

species that have been studied have not matched up with the species 1 here that were injured. For instance, the -- most of the work on 2 the effects of oil on ducks have been effects on oiled mallard 3 What happens with mallard ducks -- level of oil -- we can 4 ducks. give them oil all day in huge quantities, and it doesn't have any 5 effect on them at all, and there are other sea birds which you can 6 7 put a drop of oil on the eqq or a couple of microliters, and the egg -- the embryological process has essentially failed. Now, the 8 9 problem with transferring the knowledge from one to the other is 10 that you have this inter-species difference. Harlequin ducks are very difficult to -- as an experimental subjects to keep. We would 11 have -- we talked at great length over the years about trying to 12 get somebody to raise harlequin ducks so we could test this idea 13 that maybe they're very susceptible to low amounts of oil, and we 14 haven't been able to do it because they're very difficult -- as 15 laboratory subjects. We did do some work on exposing mink to oil, 16 17 it was done at the University of Alaska Fairbanks by the veterinary -- the veterinary pathology up there. Essentially we spent quite 18 a bit of money to find out that you give mink a lot of oil, it 19 doesn't have any problem with reproduction, but they pass the food 20 through their gut a little faster for some particular reason --21 well greased -- whatever. But -- so, I think one of the big 22 problems we faced is that -- in this particular oil spill is that 23 the -- we had species that were -- that were greatly affected, but 24 we didn't have laboratory baseline data. We didn't have toxicology 25 26 on sea otters, we didn't have toxicology on harlequin ducks, we

1 didn't have toxicology on river otters, and we -- we kind of needed
2 that information and it's difficult to transfer between species.
3 I don't know if that answers all of what you ...

MR. DENNERLEIN: No, it answers a lot of things. MR. SENNER: Chip, we also had a problem in that mink study, there was considerable criticism from some quarters of the

concept of our keeping mink and feeding them oil.

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MR. DENNERLEIN: I can understand that.

9 MR. SENNER: And, that might even go, you know, in 10 spades if it was harlequin ducks or sea otters or things like that.

MR. McCORKLE: Ladies and gentlemen, as interesting as 11 12 this is, of course is, we may have strayed a bit from the subject at hand. I suppose there is a (indiscernible) in return, and I 13 14 recall from my lay readings of studies of marine mammals and sea 15 birds in the Bering Sea, we would rush 15 or 20 scientist to fight 16 over two or three samples of a poor captured critter, and I'm not 17 sure we came out in anything except as befogged as before. We will 18 entertain one or two more questions from those who haven't asked of 19 our speaker, and we'll start with Dave and we'll go to -- was it 20 Thea -- or was it, Thea. So, you should lead off.

21 MR. COBB: How comfortable are you with the 22 assumption that the populations were at equilibrium in your study 23 areas prior to -- during -- you know, before the oil spill?

24MR. BODKIN:With sea otters?25MR. COBB:With sea otters.26MR. BODKIN:Reasonably comfortable.We knew that we

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had sea otter -- you know, they were there twenty years before the spill, at least at the furtherest northern area that we can look at. It's possible that, you know that -- that it was recent reoccupation at that time, but even twenty years is a fairly adequate amount of time to see the structuring process of the sea otters on their prey.

7 MR. MCCORKLE: But that does not then -- that falls 8 outside a mere assumption?

MR. BODKIN: Pardon me?

10MR. McCORKLE: That -- that goes beyond then the11assumption of equilibrium? Do you feel -- you feel comfortable?12MR. BODKIN: Well, yeah, given those constraints.

MR. MCCORKLE: Thea.

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MS. THOMAS: Well, mine kind of ties along with that. I was just wondering, have you looked at the overall population levels of the sea otters in the Sound, because if there appears to be fairly healthy populations in certain areas of the Sound ...

Exactly, and that's part of the problem 18 MR. BODKIN: 19 that we have, in that there is a relatively large population on 20 most recent estimates of over 12,000 animals, nearly 3,000 alone in 21 Orca Inlet, and -- so, in order -- if we have, let's say we have a hundred animals in this area and -- and there's supposed to be 22 three hundred there, you know, that's two hundred becomes masked 23 very easily when you have a population of 12,000. So, if you're 24 asking a question on the -- on the order of the oil spill and the 25 26 magnitude of the mortality event, and what we can detect now, the

area is very small that we see, that we can see a lack of recovery. 1 Not that we are unable -- you know, the other way to look at is 2 perhaps we don't have the resolution in our tools to see the 3 process of recovery. In other words -- you know, we're looking at 4 confidence intervals around our estimates of 15 to 20 percent, 5 which are pretty good, but that doesn't allow you -- it seems very 6 small changes in a population of 12,000 animals, and we have plus 7 or minus nearly 3,000 animals in that estimate. So, there are 8 healthy populations in Prince William Sound and throughout North 9 America. And, in fact, that's one of the interesting things I'd 10 like to point out is that this is the first -- or, particularly the 11 sea bird, sport fish study, you're looking at long-term declines 12 that were -- you know, occurred before the spill, over the past 13 twenty years, you know, there's been dramatic declines in marine 14 mammals and sea bird population in the north Pacific. During that 15 same time, sea otter populations have been growing at about 20 16 percent per year, up to 20 percent per year throughout much of the 17 It makes a nice comparison, we have a marine mammal, a 18 land. nearshore marine mammal that's -- that's growing at a rapid rate 19 and has been for the past many decades, and during that same time 20 period we have these other marine mammals, more pelagic species 21 that are -- that are -- have been undergoing decline under a longer 22 23 time period.

24 MR. McCORKLE: Mr. Bodkin, thank you. Thea, follow up? 25 MS. THOMAS: (Indiscernible) I guess where I'm coming 26 from is I -- maybe in my mind I'm questioning a little bit the benefit of spending money to study a population that's in the Sound
 itself appears healthy. I realize in an isolated area, it might be
 having some recruitment problems, but in the Sound itself it's a
 pretty strong population.

5 MR. BODKIN: Throughout the north Pacific it's a strong 6 population. Exactly -- if you look at it at that scale, you know, 7 the affect of -- the removal of three or four or five thousand 8 animals from the oil spill couldn't be detected, and their 9 population of 150,000 animals, that likely occur in the north 10 Pacific. It is -- you know, it's a small problem, or small scale, 11 I guess, what we're seeing.

12DR. SPIES:The study -- this study in particular13study includes a lot more than sea otters.

MR. BODKIN: Right, just sea otters, that's right, and I knew this would happen, I'd get -- you guys guess which part I'm in, right.

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DR. SPIES: Take your whiskers off (indiscernible).

MR. McCORKLE; We want to thank you for coming to be with 18 us, and our thanks also to Bob -- go to Bob Loeffler for bringing 19 20 on this trio of excellent presenters this afternoon. It's been a very interesting, a very educational, very exciting time for us to 21 hear these gentlemen speak, and we give you the last word for a 22 23 minute or so, if you'd like to close before we have the final word, 24 on a couple of things. We do have to clear the room shortly for it to be reset for the 6:30 telecast -- no the telephone conference --25 26 teleconference this afternoon at 6:30 or so, so we can't go on here

forever, but we will give just a couple of more minutes, if you'd
 like to have a sum up.

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MR. LOEFFLER: Well ...

MR. McCORKLE: I mean, it's not mandatory. Okay.

MR. LOEFFLER: There was a third part of this -- this is 5 important to us, and that is whether people have comments now 6 before we begin evaluating proposals on the overall part of the 7 restoration program, that if -- I think this is an ongoing question 8 that's going to be -- that we're going to take up at multiple times 9 to -- through the 27th of -- through the July meeting. But, I 10 think it's really useful for us to think of whether people have to 11 have comments on this as we go into the project evaluation, because 12 as we go into evaluating it, if there are ways we should be 13 thinking about it, we kind of need to know that now, and we haven't 14 had that discussion. 15

16MR. McCORKLE: What about tomorrow morning? Could you17come and be with us tomorrow morning for a few minutes?

MR. LOEFFLER: Sure, that's kind of ...

19 MR. McCORKLE: Well, I did not mean to cut you off 20 because you had more to say.

21 MR. LOEFFLER: That's what I'm saying, that's what I was 22 doing.

23 MR. McCORKLE: The curtain hasn't fallen here. We do 24 come back tomorrow, and it is important, we haven't finished the 25 overall review of the draft restoration program, but I feel that's 26 going to take a long time, and we just can't sit here much longer. But, I think we'd like to do it tomorrow, wouldn't we group?

MR. LOEFFLER: I'm at your service.

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MR. McCORKLE: Well, thank you for being there. We would 3 4 like to take it up again tomorrow for perhaps a half hour or so. I would like to defer though to before we adjourn in a few minutes, 5 6 Chris Beck, who begged to have a few minutes earlier on and we all asked if he would wait until this time when we were all gone and 7 8 tired, for him to make his presentation, because we can also get something else on the agenda tonight for us to discuss tomorrow. 9 10 Chris, could you address us for a few minutes?

Sure, although I think what I would say is 11 MR. BECK: 12 simple, I was just looking forward to the discussion that we've now decided to defer until tomorrow morning because I'm left with a 13 14 sense that there's some really needy issues for us to talk about, 15 and so maybe what I would suggest is, I ran upstairs at lunch and 16 ate my sandwich in front of the computer and put together a quick 17 one page summary of some of the assumptions and the questions that So, maybe I'll pass these around right now, take twenty 18 I had. 19 seconds to explain them, and they're basically, I'm -- the intent 20 is to have it be focused on the subject that Bob is going to lead 21 us through tomorrow morning, so maybe I'll just explain what these are and then we can all go home, and talk tomorrow. 22

23 MR. McCORKLE: Why don't you pass those out and explain 24 them while we go, and while that's happening, I'd like to ask the 25 group if you'd be willing to meet at 8:30 tomorrow. Now, I know 26 the staff can't have coffee ready immediately, but we could have, we could meet at 8:30 and have coffee at 9:00 or something like
 that. How does that sound?

MR. LOEFFLER: There's one point before you get too far into the agenda that I'd like to bring out, and that is the variety of characters that were coming to talk about habitat tomorrow, are all expecting to be here at 9:00.

MR. MCCORKLE: That's all right.

8 MR. LOEFFLER: In terms of juggling your schedule, it's 9 probably best if you do the habitat portion at 9:00.

10 MR. McCORKLE: We'll let them come on at 9:00. They may 11 have to wait a minute or two, because we're going to have to have 12 your review, and we're going to have to deal with the list which 13 we've just received, so they'll be here to -- have a few minutes. 14 What's that?

MR. LOEFFLER: Okay. I ...

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16MS. McCAMMON: We may not be able to finish that by 9:30.17MR. LOEFFLER: Right.

18 MS.McCAMMON: ... but when we do break ...

19 MR. McCORKLE: Okay, Chris.

20 MR. BECK: Well, I could just briefly explain what 21 I've handed you and -- I guess, as a background, the starting 22 assumption -- the thing that I've listed there under that phrase. 23 It is my primary reaction having sat down through three days of 24 Exxon Valdez restoration process, is that the process has taken on 25 a much bigger agenda, than the narrow definition of restoration. 26 Just one little phrase in the middle of the -- of the page, it

1 says the EVOS process has already shifted away from restoration in 2 the strictest sense. That news was brought home very strongly by the presentations we heard this afternoon. We need those 3 4 scientific projects -- arguably are very valid, but they strike me as -- as several steps removed from restoration. I'm -- perhaps 5 6 one way to test that is to wonder how much funding is available to 7 actually implement the findings they may reach in 1999, if we're going to conclude that we need a major program to clean mussels, or 8 9 whatever they might reach. I -- it strikes me that what they said, 10 what they're about is basic ecological research, and each one of them in different ways explained the notion that, really what 11 12 they're about is leaving a legacy of knowledge for the future. So, 13 that to me is support for the notion that we're not worrying about restoration here, we're about something several steps from 14 15 restoration. I think the habitat acquisition program -- physically 16 a valuable program, but it's several steps also removed from restoration. It's in the ballpark, but it's not restoration in the 17 strict sense, as most people unfamiliar with the project would 18 19 think it would be. If those departures have in fact been made, we 20 move from restoration in the strictest sense, then I think it's 21 time for us to accept that reality and go on, and say, well, let's be more explicit then, really, what is the broader set of 22 23 objectives that we're turning to. I think we're turning to broad base ecological research. And, my personal goal -- my starting 24 25 assumption is to the greatest extent possible (indiscernible), this restoration process should broaden its efforts to achieve the 26

following goals: long-term sustainable ecosystem health, both for 1 2 Prince William Sound in the spill area, but I think for the world. 3 I think we're talking about -- how can we learn from this and apply that. Maybe in (indiscernible) -- or proposed -- I shouldn't have 4 done (indiscernible) -- not spill area, proposed oil sale 149. You 5 know, there's a lot of opportunity to learn from this -- this 6 floating university that's been creating with a half a billion 7 dollars, and then secondly, what can we learn about and what can we 8 do about sustainable beneficial human use of the spill area. 9 So, 10 my thoughts. One way to broaden this whole process is to -- and to 11 maximize the legacies, settlement spending, is to restructure some of the things we're doing already, so they do double duty, so they 12 serve more than a single set of objectives, and then I tried to 13 14 list a couple possible examples. The first one has to do with data 15 collection with science, and the suggestion there is -- both what 16 the types of projects, and structure them in a manner that makes them -- has the broadest application for three areas: 17 one is specifically the land management, make it easier to understand the 18 19 consequences of past and proposed management choices. I think it 20 really is criminal that we're getting ready to have oil sale 149, and we don't have any communication between this broad effort, all 21 the money spent, all the time and energy spent, and the decision 22 23 about that sale. I can understand why when it happened, but I 24 think it's unfortunate, and that's just one example. There's going 25 to be thousands and thousands of decisions made into the future about how to manage the spill area, and I really think that a real 26
1 focus of this effort ought to be on influencing those, that has to 2 do with type of studies, how the information is made accessible, how it's assimilated, what's studied, what's not. 3 It suggest a sort of criteria that I'm not sure of being applied, and maybe 4 that's a little side bar in all of this. I feel a little bit out 5 of sorts walking in with all these criticisms of a process that I 6 have to deny -- do not understand, and may suggest I've not read 7 8 the books as thoroughly as I might have, but maybe that you'll be 9 able to reassure me the logic things are well in hand, and thanks 10 for your comments Chris, we've got this taken care of, and I hope that's the case. But, the second then application area is to use 11 this data to give concerned citizens that watched our group, the 12 13 knowledge that they need to influence land managers. So, a politically correct word to empower people to better participate in 14 15 ongoing land management decision-making. People who are commenting 16 on it, whatever is happening in all the actions that are happening now and in the future, ought to be able to access all this 17 18 information and come forward in a very solid way and say, well, 19 we've learned from this research that if you do that, this is 20 likely to happen, therefore, you know, you can imagine that train 21 of thinking. The third one is the most esoteric, in some levels, 22 but I think in the end it's the most potent, and it has to do with 23 informing people and assessing their values. I think that the plan 24 -- Seward Sea Life Center is a great example of the fact that this 25 whole process is already turning in that way. I think in the end what drives public decision-making isn't so much science as it is 26

1 the kind of gut feeling of large masses of the public to decide 2 that something is important or not, and somehow I think all of this knowledge -- and to me it's really fascinating -- how to be somehow 3 more accessible so my kids, so tourist, so -- you know, whoever it 4 is can somehow tract this half a billion dollars expenditure in 5 science, and find themselves fascinated by and curious about and 6 wanting to visit and understand all these subtle process to -- to 7 8 be really grandiose -- that really affects it -- you know, fate of human kind on the planet. This is an incredible opportunity to 9 10 understand the ecosystem. This is turning into a big ongoing speech, so the drums and the trumpets will come soon, but I do 11 really think that we could do a better job as a group of harnessing 12 13 this money to produce data of a form -- of a subject and of a 14 character in accessibility so that people can get at it, use it, 15 and that's really where this idea of what is our legacy. Well, 16 it's something about the accessibility of the data. I'm really 17 concerned -- even hearing these well-thought out presentations 18 today that as a typical, reasonably informed citizen, I have a master's degree in science, it's really hard to understand this 19 20 stuff, and I think that means that people will have less sophisticated knowledge, they're going to have trouble using this 21 data to influence how these things I've listed. 22 So, that's --23 someplace in there is my speech, I quess the other one I put down 24 there as number two is another example of how we might broaden the 25 benefits of all this action is to maximize the impacts, even if 26 they are interacts of the EVOS program on cultural and economic

1 health. A lot of talk has already come up on that subject since I've been a part of this process, local hires and all these warrant 2 suggestions today about, you know, how each program -- with science 3 programs took notion of -- put up something in science rooms in the 4 Valdez school -- the high school library that explains what's going 5 on in the Sound, but I guess what I would like to do is have the 6 group as a whole, tomorrow morning sounds like a good time to do it 7 8 and it might continue through the summer. We respond -- to my 9 basic observation that this whole program has expanded in an 10 important way beyond the simple goals of restoration, and once that line is crossed that we're really talking -- I think it's fair to 11 be explicit, that we haven't -- we're no longer just doing 12 13 restoration in it's narrow sense, and once you've opened that door, then I think it's entirely legitimate to -- to be much more broad 14 about what are the things the group might undertake to do. We sort 15 of slipped into it is my sense, without being explicit about that 16 17 -- that transition, and as a result, we're in forestry, but we're told we can't be in oil. I'm not sure there's a logic that really 18 19 holds up that says, of course, we're in trees, of course not oil, and so those are some questions, and I would really like to be able 20 21 to discuss them with the group over the coming years.

22 MR. McCORKLE: Thank you, very much. We're all much 23 richer for your enthusiasm, and your arm waving, we would like to 24 have the band, but we will put this on the agenda for tomorrow, and 25 we will be out of here at 5:00. I would like to just review what 26 tomorrow's agenda is, for our consensus. We will start at 8:30 and

we'll begin with things that are not on the agenda at this time. 1 We will start the discussion of this paper, and that will run for 2 a few minutes until we decide how much of that we can stand, and 3 we'll put it forward to additional meetings and times if that's the 4 view of the group. We will then hear the overall review of the 5 draft restoration program. We'll begin that part of the process, 6 and I was told that's going to be much more than a half an hour. 7 How much do you think you -- time you'd like to have for that Bob? 8 MR. LOEFFLER: I think I would mix it in with what you 9 were talking about here. 10 MR. McCORKLE: Okay. 11 Just giving people information. I can't MR. LOEFFLER: 12 imagine it more than an hour. 13 All right, then we'll take up ... 14 MR. MCCORKLE: MR. LOEFFLER: You know, I don't know (indiscernible). 15 ... then we'll take up review of small MR. MCCORKLE: 16 parcels, as time allows. No, I want to remind everybody of the 17 6:30 teleconference here this evening for those of you who can come 18 back, hopefully a number will, and I'd like to give the last word 19 to Molly, if you have anything you'd like to say before we adjourn 20 -- before we recess. 21 MS. McCAMMON: Actually, Mr. Chairman, if I might, make 22 maybe a suggestion on tomorrow morning's agenda, if we start at 23 8:30, maybe at 9:00 we could go into small parcels and then come 24 back to the restoration program, since we have five or six folks 25

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who are coming specifically on small parcels, and I'm not sure it's

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1 going to take actually whatever we have down here --, almost three
2 hours -- two and a half hours to do those, it could be a lot
3 shorter than that, and then we could go back to the restoration
4 program.

5 MR. McCORKLE: I don't know -- we only have one hour 6 don't we, just 9:00 until 10:00.

MS. McCAMMON: No, it's after the public commentary, we
come back to it.

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MR. McCORKLE: Yeah, that's right.

10 MS. McCAMMON: So, it could be done all in one fell 11 swoop. It depends on what level of detail we get to that.

MR. McCORKLE: Well, what I'm hearing you say is that we 12 will begin at 8:30 and at 9:00 when the hats come on, we'll move to 13 14 review the small parcels, go until the public comment period. At 15 the conclusion of that, we'll decide what we -- what we take up 16 again, probably try to finish up the small parcels, and then go 17 into additional general discussions, as long as you wish. Does 18 that sound like a notable program? Could we beg the staff to maybe 19 put that down on a piece of paper so we can get rid of this -- this 20 rather, I quess, annotated version we got here. If we all have 21 something we can follow, it will be like an abbreviated agenda for 22 tomorrow.

MS. McCAMMON: We -- we also need two decisions tomorrow, and the first is, I would like a small working group to help us develop the PAG budget for FY '96, and I think just a couple of people would be fine. Don't have to decide that right now, but you

can be thinking about that. And, then also to be thinking about 1 2 who would be interested in participating in the work force and Chief Scientist review sessions, I think it's June 6th or the 7th. 3 MR. McCORKLE: Would you put them down as -- put them 4 down as action items, so we'll be sure to focus on those, and now 5 I would like to extend to ones who have an absolutely critical 6 comment that must be made. 7 One critical comment. MR. DENNERLEIN: 8 MR. McCORKLE: You'll have the second one, Brenda. 9 10 MS. SCHWANTES: Nominees -- do the elections, on the 11 election ... 12 MR. McCORKLE: That will come back on the agenda for discussion. 13 MS. SCHWANTES: Tomorrow, okay. 14 15 MR. McCORKLE: Maybe we will hold the election. Chip, 16 very short. 17 MR. DENNERLEIN: Think about, from the staff, what we want to hear from them on small parcels, and I would want to tell 18 my colleagues, I don't know what you've heard, but this one subject 19 that I have heard more from among a broader group of constituents 20 21 in more locations than any other thing. There's one thing that seems to have gotten short shrift or little money, but much 22 attention in communities, it is small parcels, and maybe we can 23 24 breeze right though them, but from Termination Point to resources in Kachemak Bay, I'm -- this is what I've heard about, and I think 25 26 it deserves some real attention. I just wanted to say that so that

we're prepared.

MS. McCAMMON: Mr. Chairman, I was indicating that we would just kind of go through your comments, but I think actually they may be fairly straightforward, so ...

MR. McCORKLE: Do you hear -- oh, Pam.

MS. BRODIE: I'd like to move that the PAG direct the 6. staff to come up with a consistent color name for this book. Ι I think raspberry book. In the would suggest fuchsia book. interest of accuracy, I think red should be tossed out (laughter).

MR. McCORKLE: All in favor ..

What color is Kim's jacket, I think ... DR. SPIES: I sort of like raspberry. We'll take it MR. McCORKLE: Ladies and gentlemen, we stand recessed. up tomorrow.

(Off Record 4:58 p.m., April 20, 1995)