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4 5 6 7	NOVEMBER 13, 1989 ANCHORAGE, ALASKA	
8 9 10	OIL SPILL COMMISSION MEMBERS	
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2509 Eide, Suite 5 Anchorage, AK 99503 (907) 272-2779 and I understand it is basically because of lobbying
efforts on the Gulf Coast by the maritime industry in the
Gulf Coast. Not necessarily the oil industry or the
tanker industry, but some of the offshore operators that
operate port boats and tugs. They have resisted that
because it would require a different mode of operation
than they are traditionally used to.

MR. PARKER: Your training requirements. Where would that kind of training normally be handled?

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Well, the officers on board -- we MR. DORSCH: 10 talk about officer training. The officers on most of our 11 ships have gone through four year maritime academies where 12 they have received extensive training, shipboard and 13 ashore. And, they have received Coast Guard license after 14 sitting through an extensive exam process. My exam was 15 I don't know of any bar exam that five days long. 16 requires five days of examination. It's an extensive 17 There's also a Bachelor Science Degree review process. 18 issued to the graduate of the maritime academies. We 19 generally hire people from the maritime academies. 20 License renewal is every five years. Renewal generally 21 requires that you sit down and take an exam to prove your 22 continued proficiency. Virtually very few other profes-23 sions, licensed professionals have to go through such 24 process and certainly doctors and lawyers don't. Although 25

102

they should.

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Radar simulators are required when you renew your exams. Radar simulator process is a week long process each time you renew your license. Firefighting school is required now. CPR class was required before you renewed your exam. I don't know if the Coast Guard dropped the CPR, I believe, I don't know.

Then, in addition to that we feel that simply by R virtue of the fact that you graduate from maritime 9 academies you are not necessarily capable of handling oil 10 aboard a tanker. We have a policy of where we hire 11 maritime -- top maritime academy graduates into the decker 12 engine department. Myself served a six month to a year -13 - six months as an ordinary seaman before I was allowed to 14 move up. This gives the person some on-the-job training 15 and to learn his way about an oil tanker and how to 16 operate cargo. 17

We also require of our officers that they go to 18 simulator schools. I am sending two of my tug officers to 19 a simulator school back in Kingspoint next month -- this 20 month. We also require firefighting school in addition to 21 what the Coast Guard requires. We also conduct, as many 22 other companies do, officer training seminars. We have 23 Masters in, I set up a scenario where a selected group of 24 Masters where we analyze casualties. If you were the 25

103

Master of this ship and the ship started to break up what
 would you do? And, the seminar was to generate a discussion amongst the participants to what the best thing to do
 for the ship and for it's crew.

5 MR. PARKER: Okay. Any other questions?
6 MR. WENK: Mr. Chairman? Just one brief one.
7 If I understood correctly, you've been describing the
8 additional requirements by Chevron?

MR. DORSCH: Correct.

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10MR. WENK:Is there any industry wide11discussion or agreement on this question of training and12standards?

MR. DORSCH: That has not been defined. There 13 is -- the API does call for additional training standards, 14 yes, of officers in particular. As far as I know, it has 15 not been pinpointed as to -- or has not been nailed down 16 as to what they specifically want. In other words, how 17 often should a person go to firefighting school, how often 18 should a person go to rada simulator school. On the job 19 training has traditionally been left up to the individual 20 companies and I've got to say one company is probably 21 better than another company. And, I know that BP and 22 Shell and the major oil companies who operate tankers have 23 too much to lose to entrust their ships and their cargos 24 to unqualified people. The same cannot be said of perhaps 25

104

1 independent operators.

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2 MR. WENK: You mentioned, if I recall 3 correctly, five days of examinations. Is this for your 4 first....

MR. DORSCH: That was my exam. Since then it has been reduced a multiple choice, where I think it's probably three days. Two or three. .

8 MR. WENK: My understanding is that it's not 9 only been reduced in terms of the number of days, but the 10 multiple choice type of question is a lot less stringent 11 on the person being examined than was the case when you 12 took the exam and you were obliged to go into considerable 13 scenario narrative.

MR. DORSCH: It was primarily an essay type of
test which took much longer. It doesn't necessarily mean
it was any better. Multiple choice is a mixed blessing.
It's easier to take the test, but it's also easier to miss
the answer. Especially with the Coast Guards propensity
for throwing trick questions in there.

Typically, let's say, the rules of the road exam. When they ask you to describe the lights required of a tug towing a barge, you had to go into great depth and details describe what the distance between the lights was, what the visibility of distance between lights was. The ark of visibility for the light. What color the light was, of

105

course, and where the light had to be displayed. To cover
all the bases, it took you considerably longer than it
would now. Now, with the multiple choice question it
makes it easier for you, but it doesn't mean you are any
less competent.

6 MR. WENK: Well, I asked Coast Guard officers 7 about this very point. They were unanimous in saying that 8 the new exams are considerably easier. They were also 9 unanimous in saying they would have preferred not to have 10 gone to these multiple choice questions, but were obliged 11 to by cuts and budget.

MR. DORSCH: I understand that when they first came out -- I didn't have to take my exam under the multiple choice format. My initial exam. I understand that when they first came out 75% of the people taking them could not pass them. Whereas when I took it under the old system 90% of us passed.

18 MR. WENK: That also says something about
19 training. Thanks, Mr. Chairman.

MR. DORSCH: The next....

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21 MR. HAVELOCK: One question on that. If both of 22 the oil moving into the United States is coming in under 23 foreign flag, then this aspect of the cure, that is 24 licensing and training of mariners is catching only a 25 small fraction of the problem. Is that right?

106

MR. DORSCH: Is catching -- it's catching the 1 U.S., ves. It's catching what we can control. We hire, 2 as I mentioned to you, we have 41 ships in our fleet, 3 Chevron does. Seven of which are U.S. the other the Liberian, the Bahamian, Bermuda flag with the officers 5 from other countries. And, I've got to say that I'd be 6 very chauvinistic if I told you that U.S. officers were 7 better than all the rest. It is simply not the case. We Q have some excellent Italian officers, excellent British 9 officers and some excellent Scandinavian officers. We are 10 also starting to hire some officers from India and the 11 Philippines. We are hiring them in the lower ranks and 12 letting them work up. We think that they have excellent 13 potential as well. To say that their educational level is 14 any less than the United States would be very misleading 15 and totally inaccurate. In some cases there training, I 16 would have to say, is superior to ours. In some ways not 17 as well. They have excellent maritime academies, school 18 ships and training programs. 19

20 MR. HAVELOCK: But, they meet no U.S. ad21 ministered standards. Is that right?

22 MR. DORSCH: No. No, but the adoption of the 23 STCW, did I get that right, would give the Coast Guard 24 jurisdiction over ensuring that these people were properly 25 licensed by their flag states and that the bridge watchers

107

**1** are maintained properly.

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So, when the ship does come here right now the
Coast Guard does not have that jurisdiction. As I
understand it.

5 MR. HAVELOCK: Does API support the giving the
6 Coast Guard jurisdiction?

MR. DORSCH: That's what I mentioned before in the previous issue. Yes.

The next issue, to move along, is the question of 9 automatic pilots that you brought up earlier, here. The 10 recommendation, again, is short. Alarm systems for 11 automatic pilots should be retrofitted for all tankers. 12 The alarm system that they are eluding to there is one 13 that would tell you when the automatic pilot is engaged. 14 There's already alarm system on automatic pilots to 15 indicate when you have drifted off -- when your automatic 16 pilot has failed and you are starting to drift off course. 17 If you drift off course 2 degrees or so, an example, an 18 alarm comes on and tells you there is something wrong. 19 The alarm that is being referred to here is an alarm that, 20 I guess, to use the Exxon Valdez case as an example, if 21 the automatic pilot is engaged and the helmsman, perhaps, 22 is not aware of it and he thinks he's turning the ship 23 with the wheel and in actual fact the computer's in 24 control, when he starts to turn that wheel the alarm will 25

108

come off and indicate, 'hey, you are not doing any good turning this wheel, the automatic pilot is control'. That is the alarm that's being eluded to there.

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The use of automatic pilots is another issue. Generally any ship that I've been on the automatic pilot 5 is being engaged in restricted waters nor in restricted 6 visibility. There are occasions, though, when you are on 7 a long course for an extended period of time when the 8 automatic pilot could properly be used. Because in many 9 cases the computer can steer better than the individual. 10 Not the computer, but the compass 11

12 can steer better than the individual. Having steered 13 myself, I'll tell you, I was a terrible helmsman and that 14 automatic pilot could steer a lot straighter course than 15 I ever could.

Questions on automatic pilots?

MR. PARKER: I don't think so.

MR. DORSCH: The next issue is shipboard 18 response capability. The recommendation is ships' 19 specific oil spill prevention and control contingency plan 20 should be required, but shipboard oil spill response 21 equipment should not be required. This is a fairly 22 controversial issue here. An update on that: API has 23 actively supported provisions in the House and Senate Oil 24 Spill Bills respectively to mandate ship's specific 25

109

contingency plans. Initial efforts by API to develop an industry stand to replace (?) on hold due to this legislation.

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API still opposes mandating spill response equipment on tankers. Once it's research program begins API will request the petroleum industry response organization, PIRO, to make a high priority research on ship's specific oil spill response capability.

Contingency plans are being worked on. As Mr. 9 Dooley pointed out in our previous meeting, contingency 10 plans for a ship mostly consist of a phone number. Who do 11 you call? But, they should also consist of emergency 12 cargo handling plans, cargo hazards, to go with particular 13 cargos, such as the High H2S cargo I previously mentioned. 14 Notification requirements as we just mentioned. Emergency 15 ship handling outlines and vessel salvage plans. Another 16 words, damage control plans. 17

But, when a ship runs aground or comes into 18 collision, the Master and the Officer's responsibility in 19 that particular case is to save his ship and to save the 20 lives of his crew on that ship. It is unrealistic to 21 think that he can initiate efforts to control oil spill. 22 He can initiate efforts to stop the oil spill, seek the 23 source on board his ship and stop it, but his first 24 responsibility is to salvaging his vessel. It is virtual-25

110

ly impossible for a ship to carry and deploy oil spill booms and clean-up equipment. It is unsafe to do so. In storm tossed waters it would very difficult and unsafe for a limited crew to watch and deploy oil spill booms when their primary responsibility is saving that ship and saving it from breaking up on that rock that it is hung up on.

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The question came up a little bit earlier about 8 containment by Mr. Sund. About containment around the 9 vessel. That is a debatable issue inasmuch as containment 10 around a vessel implies the containment of explosive hydro 11 carbons around the primary source of ignition. The paper 12 I read the other day referred to a ship that spilled 13 gasoline and the ship could not transmit on it radio 14 antenna for fear of igniting that gasoline. There was a 15 similar fear with the Exxon Valdez that you contained that 16 oil around that light hydro carbons bake off or release 17 from that crude oil and drift around the ship, and provide 18 a hazard to the crew. There's many sources of ignition on 19 board the ship, primarily, of course, the stack of the 20 ship, the exhaust stack. That's not to say that it 21 shouldn't be contained in the vicinity, but it's not a 22 clear cut issue that it should be contained around that 23 In some cases it could be more of a hazard than vessel. 24 anything else, than help. If that oil does ignite, you 25

111

could start a fire on the ship and cause much more of the oil to spill and be released.

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Mr. Chairman, it just reiterates MR. SUND: 3 my point that I don't know why PIRO is spending 90% of 4 their budget figuring out how to clean up oil when nobody 5 wants to worry about how to contain it to clean it up. We 6 ought to spend 90% of the budget on figuring on how to 7 prevent the ship from hitting the rocks and about 10% on 8 how to deal with the rest of this problem out here. We 9 just run into these conflicts. If you don't want to 10 contain it -- you can't clean it up unless you contain 11 unless you contain it, you can't contain it because it 12 will cause a hazard to the ship, so you've got to let it 13 Once it's free in the ocean, you can't clean it up, qo. 14 because you can't contain it. So, why are we worried 15 about it? I don't know. I think the priorities are in 16 the wrong place. 17

MR. DORSCH: Well, I agree and unfortunately in 18 our today's scheduling got the cart before the horse. Ι 19 should have preceded the previous speaker in talking about 20 all this oil spill prevention. Many of your questions 21 that was directed to him that were about prevention and 22 that was not his point in being here. That was my point 23 in being here. I fully agree with you that prevention is 24 a much higher priority than response. But.... 25

112

1MR. SUND:I'd ask you then, why does the API2budget only have \$150,000.00 out of 9.3 millon working on3the issue?

MR. DORSCH: Again, I could only speculate. I'm not qualified to answer that. I didn't come up with the API budget. I am not part of the API.

MR. SUND: Thank you, Mr. Chairman.

MR. HERZ: Mr. Chairman? You mentioned the 8 contingency plans but you don't mention anything to do 9 with training or drilling. Does API does a position on 10 whether crew tankers should as part of that Contingency 11 Plan be required to do training and be subjected to drills 12 either announced or unannounced in the same way that 13 landbased terminal operators and terminal contingency 14 plans require those kinds of things? 15

MR. DORSCH: Again, we get back to the ship 16 response capability. You are talking about... yes, 17 shoreside establishments do conduct drills frequently. 18 Ships do not conduct, nor is it intended that they conduct 19 oil spill clean up drills. Because, as I said before, we 20 favor the shoreside response and not the ship. The ship 21 can --- the ships do conduct drills, yes. But, not for 22 Ships conduct fire and lifeboat drills on a clean up. 23 weekly basis and they conduct other drills, too. 24

MR. HERZ:

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But, fire depression and lifeboat

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drills are very different than what people on the vessels 1 should do in case of a spill. That is not life threaten-2 ing -- I mean, yes, there's always the possibility of 3 fire, but a lot of other things. The question is whether either in licensing certification and training or in the 5 ship or oil spill response capability, whether API has 6 thought about, and if they haven't you think they should 7 think about, some component of training and drilling for 8 the shipboard people in terms of what to do. 9

MR. DORSCH: The API report that I've been 10 asked to address does not particularly bring that up. 11 That doesn't mean that your idea is not a good idea. Ι 12 personally think that's probably an excellent idea. The 13 present API report, however, does not address that 14 particular aspect. 15

MR. HERZ: Thank you.

MR. SUND: Mr. Chairman, just one last
comment here. The issue here is that the ship and its
cargo are the predominantly important thing to save its
salvage.

21MR. DORSCH:True.22MR. SUND:And that's kind of been admiralty23law for....24MR. DORSCH:I would say the crew is predomina-

25 | ntly....

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114

Okay, the crew. Okay and then the MR. SUND: 1 ship and the cargo next. Do you see a point in history 2 here where maybe the surrounding environment is more 3 important than the ship and the cargo? I'm not going to 4 put it more important than the crew. But, in terms of how 5 we should respond to these things. If we evacuate the 6 ship of the crew, then we can weigh off the values of --7 is it more important to contain that oil around the ship 8 even if it causes a danger to the loss of the ship and the 9 cargo and whether to let it go. 10

MR. DORSCH: You asking for my personal 11 speculation. I believe that the ship and the cargo should 12 be sacrificed to a greater -- if it can be shown that the 13 greater exposure is to the environment. Yes. Yes, I 14 don't think you could sacrifice the environment for the 15 sake of the ship and its cargo. The crew, however, is top 16 importance. 17

MR. SUND: I recognize that. I know we are
late here, Mr. Chairman. I just want to put that down.
I might follow that with you, again, on how do we get from
here to there. We are not there now. Under the current
law. The question is how we get there. Thank you.

MR. DORSCH: There are two remaining issues.
Vessel configuration and design, i.e., double hulls. I'm
sure you want to talk about. And, finally, moving along,

115

vessel size. The recommendation regarding vessel con-1 figuration is the merits of full application of ballots(?) 2 sides reduce tank size and double bottom construction 3 should be carefully studied by the National Academy of Science or other independent body. Changes in vessel 5 design criteria should be developed and implemented 6 through the International Maritime Organization. And, the 7 International Academy of Science is the body that has been R asked to study this that was being referred to earlier. 9 It was not the accurate number that was previously being 10 tossed around. The National Academy of Science has been 11 asked by the Coast Guard and API supports their study of 12 this. 13

You probably heard this before. But, we in the 14 industry do not necessarily view double hulls as the cure 15 In my opinion, it's a simplistic all to oil spills. 16 approach that's been grasped by the public to make a 17 complex issue simple. If one hull is good, two hulls is 18 better. Why not three hulls? It has been shown that in 19 many cases a double hull is more of a hazard than a single 20 hull. I'm not taking one side or the other. I'm just 21 playing the devil's advocate here in showing you that 22 there are problems with double hulls. I came up with --23 our company came up with a little diagram here to show 24 what some of the problems are with double hulls are. And, 25

116

salvage ability is the main problem. If, you know, a 1 double hull ship the void space between the two hulls is 2 that vessels reserve buoyancy. In the case of, let's use 3 the Exxon Valdez as an example. Have that ship in a 4 double hull, that double hull would have been punctured. 5 That void space would have then been flooded by water. 6 That ship would have sunk further down onto that rock 7 making salvage efforts more difficult. In a single hull 8 ship, when that single hull is punctured the ship releases 9 a certain amount of oil until the oil reaches a state of 10 equilibrium with the water on the outside of the hull and 11 then the remaining oil in that tank stays there. The ship 12 is actually lost weight then and it floats up above what 13 it grounded upon making salvage efforts much more easy. 14 Double hulls, there's a diagram and as it indicates, that 15 was an example of the 35 and 39,000 ton ship. Single hull 16 ship versus double hull ship. I think it indicates that 17 the double hull ship would sit almost three foot harder on 18 the rock than the single hull ship. There has been, I 19 know, Mr. Sund mentioned earlier that in his mind the 20 Exxon Valdez, or it as been shown to him that the Exxon 21 Valdez would not have leaked as much oil or any oil had it 22 been a double hull ship, but I believe the Coast Guard 23 testimony as well as the findings of the shipyard that 24 built the ship has indicated had the Exxon Valdez been a 25

117

double hulled ship it would have sunk with the virtual 1 loss its entire cargo and not just the 110,000 barrels 2 that it did lose. That ship ruptured 10, I'm talking off 3 the top of my head here, 10 of 13 tanks, 10 of 15 tanks, 4 something like that. If that ship had been a double hull 5 ship and ruptured all those tanks and all those tanks had 6 filled with water, then in my mind and in the minds of the 7 ship builders and many others, certainly that ship would 8 have sunk. Then you would have had all that oil. 9

MR. SUND: Well, Mr. Chairman, I just want to
make the record clear that I didn't make that statement.
That was Admiral Kyme of the Coast Guard, who was also a
Naval Architect testifying to this Commission stated that
50% of the oil that escaped from the ship would not have
escaped if had it been a double hull.

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MR. DORSCH: Initially.

MR. PARKER: We don't have time to get into it 17 here, but I would like to get some people that have really 18 been working on letting -- we are not going to get them 19 before this group, but I hope the National Academy does. 20 21 Because there's something about this argument that is just not ringing, ringing to me, you know. 22 I've been going over this argument now since 1971 and we've got stacks of 23 papers everybody else has brought in and I just -- it's 24 hard for me to accept the instability in the, you know, 25

118

1	put it on the rock harder argument. I mean it's
2	there's too many people going the other way on it. And,
3	the Anyway
4	MR. DORSCH: Mr. Chairman, I submit that some
5	of the other people are going the other way, because it is
6	simpler for them to understand.
7	MR. SUND: Well, you know
8	MR. DORSCH: I think it's a simple
9	MR. SUND: Mr. Chairman, I don't want to get
10	into it here, either. But, I will. Our ferry system are
11	all double hulled and we've put them on the rocks and
12	stuck them on the islands and grounded them several times
13	and it hasn't cause any problems at all. As a matter of
14	fact it didn't leak any oil, either. They carried large
15	chucks of rocks to Seattle with them to be taken out of
16	the hull. But, it seems to me, I'll just give you my
17	point of view. I think it has to do with what the society
18	deems to hazardous of the cargo. We put L&G in a double
19	hull tanker. Why?
20	MR. DORSCH: I'm not familiar with L&G tankers,
21	myself.
22	MR. SUND: Well, they are all double hulled.
23	They've got double hulls in the bottom. They got side
24	walls. And, we do it because we are afraid of an ex-
25	plosion which will vaporize whoever's around when it
	119

Nobody argues about those tankers being explodes. 1 unstable. Nobody argues about that they are going to sink 2 if they penetrate one of their hulls when they drown. 3 They talk about the fact that if it's punctured the cargo 4 will blow up. So, my point when I discussed this with the 5 Coast Guard in Washington was that, you know, if we 6 determined oil to be as hazardous as L&G we would get 7 beyond the buoyancy question and a sinking and grounding 8 question, we'd get into whether society wants to protect 9 itself, it's environment from the cargo inside leaking 10 outside. 11

MR. HERZ: And, in fact, the bottom line on 12 your demonstration here points that up. It doesn't say 13 anything about the amount of oil being released or the 14 environmental damage, which is the think that I'm the most 15 concerned about. It says that the double hull vessel 16 would be three feet higher than the single hull vessel 17 with the associated greater difficulty of salvage. Ι 18 don't care about the salvage. That's the shipper's 19 problem. I care about the environment and about prevent-20 ing the oil from damaging the environment. And, the 21 strongest case you can make is that the double hull vessel 22 is going to be more expensive for you to salvage, that's 23 not.... 24

MR. DORSCH: No, that's....

120

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1	MR. HERZ:an issue. In my
2	MR. DORSCH: No. The concern is not at all the
3	expense of salvaging the vessel, it's the fact that you've
4	got get that ship off that rock before the heavy weather
5	sets in. You let that ship sit on a rock as you are
6	implying and it is going to break up and it's going to
7	sink and you're going to lose all that oil.
8	MR. HERZ: Okay.
9	MR. DORSCH: You've got to get that ship off
10	the rock soon.
11	MR. HERZ: The Exxon Valdez was impaled for
12	quite some time and they were able to safely offload the
13	oil and there was some pretty nasty weather that came up
14	three days after the grounding. I mean, I think the
15	argument really is encapsulated in this statement right
16	here. The associated greater difficulty of salvage which
17	is really the industry's concern about the cost of
18	salvaging
19	MR. DORSCH: No
20	MR. HERZ:the vessel.
21	MR. DORSCH: No. Negative. Negative.
22	Negative.
23	MR. PARKER: Is it normally you are not
24	going to get the ship off the rocks until you lighten the
25	oil anyway. You've got to get some of the oil
	121

MR. DORSCH: I know. I couldn't agree with you 1 that if normally, there is a normally situation. 2 MR. PARKER: Yeah. 3 MR. DORSCH: There's a number of different 4 scenarios that you would have to address. I couldn't say 5 that there's a normal situation. 6 Well, if you do get it off and MR. PARKER: 7 it's still leaking, why you are just going to continue to 8 leak oil wherever the ship proceeds. 9 MR. DORSCH: Well, then you do have to lighter 10 it off, yes. 11 MR. PARKER: Yeah. 12 MR. DORSCH: You have to light it off the 13 ruptured tanks, yes. Or transfer them to another tank. 14 MR. WENK: Very briefly. Two questions. The 15 first is if I recall correctly, you said that some of the 16 Chevron tankers are double bottomed. 17 We have five double bottomed MR. DORSCH: 18 ships. 19 MR. WENK: Why? 20 MR. DORSCH: We have them for other reasons 21 than safety. They have proven because the -- in the 22 double bottom ship, the strength members are in that void 23 space. They are not in the cargo tank itself. That 24 allows you to have cargo tanks that are flat sided, flat 25

122

bottomed, no strength members that can gather oil, and 1 the tanks strip up much easier, they clean up much easier. 2 That allows -- you can put your cargo suction in the 3 bottom of, because that's in the void space. You can 4 strip out virtually every drop of oil in that cargo tank. 5 It also allows for the segregated ballast to be on the 6 sides of that ship which is the void space in a loading 7 situation to be pumped out concurrent with cargo being 8 pumped in so it makes a much quicker turnaround on the 9 ship. 10 MR. WENK: Do you feel that you traded off 11 safety for these other advantages? 12 MR. DORSCH: No. No. I'm not saying.... 13 MR. WENK: Well, then, it sounds to me like 14 there's.... 15 MR. DORSCH: .....that double hulled ships..... 16 MR. WENK: .....something not quite consis-17 tent in what you have been saying. 18 MR. DORSCH: I'm not saying that double hulled 19 ships are less safe. I am saying there are certain 20 circumstances where they provided more of a hazard than a 21 single hull. There are also circumstances where they are 22 safer. 23 MR. WENK: But.... 24 Collisions. MR. DORSCH: 25 123

1	MR. WENK: But, all things considered.
2	Assuming there is no such thing as zero risk. Anyway.
3	And, I think we'd all agree on that. But, all things
4	considered, if I heard you correctly, you don't feel that
5	you traded off, all things considered, safety by going to
6	the double bottom?
7	MR. DORSCH: No.
8	MR. WENK: Okay. Thank you.
9	MR. DORSCH: Again, this is a complex is-
10	sue
11	MR. WENK: Oh, yes.
12	MR. DORSCH:that I think the National
13	Academy of Science should come up with. And, that is an
14	independent body. Independent of the oil companies,
15	independent of the API, independent of the Coast Guard.
16	MR. WENK: Incidently, just for the record.
17	In Admiral Yost letter I think it refers to the National
18	Academy of Sciences, the National Academy of Sciences and
19	the National Academy of Engineering are the parent
20	organizations of the National Research Council which is
21	the contract body of the research arm It's a minor,
22	really a minor point, but the Academy of Sciences never
23	does any research itself.
24	MR. DORSCH: Uh-huh.
25	MR. PARKER: I hope, you know, I hope when we
	124
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get the results from the National Academy on double 1 bottoms they know more about the issue than Prima Prost(?) 2 Committee of the Academy knew about pipelining when we 3 took the issue to them. So, you know, it depends upon who the Academy's got on the group. 5 Well, that's why, Mr. Chairman, I MR. WENK: 6 suggested we get a report from them so that you can make 7 that judgement. 8 MR. SUND: I think, Mr. Chairman, Captain 9 Elsenjohn, who is to be here this afternoon, is aware of 10 who is on that body. He might be able to tell us 11 MR. PARKER: Okay. Well, we can obviously go 12 into this for a long time. We'll go ahead on vessel size. 13 Okay. Well, I had other things to MR. DORSCH: 14 say about vessel configuration design, but I think that I 15 agree with you that we can move onto the next issue. 16 Mr. Dooley attended a speech by Mr. Roland who we 17 talked to extensively about double bottoms and design and 18 I have a copy of that speech if you care to have.... 19 MR. PARKER: Love to have it. 20 .....it if Mr. Dooley does not MR. DORSCH: 21 already have it. Do you have it? 22 MR. SUND: We appreciate it. 23 MR. DORSCH: Okay. Finally, vessel size. 24 Puget Sound presently limits vessel tanker size to 125,000 25

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125

That -- kind of putting that in perspective here, tons. 1 in 1988 the U.S. imported 6 million barrels per day into 2 the United States. That came out to be 3800 port calls. 3 That was on an average size of 80,000 deadweight ton vessels. That's just an average size. 20,000 tons on up 5 to VLCCs. ULCC's. If you took that average size and 6 decreased that by 25% to maybe a maximum of 60,000 7 deadweight vessel, you would be increasing the port calls 8 by 1100 from 3800 to 4900 or 30%. The risk there is the 9 more ships you have the more possibilities for breakdowns, 10 collisions, groundings. So, there's a tradeoff there. 11 You can have less exposure because of the small ship, but 12 you have more ships. More accidents. I think Puget Sound 13 is -- well, they've come up with this 125,000 ton that 14 works out -- it works out reasonably well for them. 15 Because it worked the Alaska Trade, but I don't think 16 that's necessarily the solution for all ports in the 17 world. 18 Mr. Chairman? MR. HERZ:

19 MR. PARKER: Yes? 20 Well, the next question is, MR. HERZ: 21 that increased number, 30% increase number of tanker trips 22 is in double hulled vessels don't the actuarial figures 23 show that we will be better off? Because although there 24 may be an increase in an number of incidents, the safety 25

126

if

will be such that the damage to the environment from those 1 incidents will be reduced? 2 I believe that's probably reach-MR. DORSCH: 3 ing, but I don't know. ▲ MR. HERZ: Those figures should be obtainable 5 from the actuarial data that exist. It should be a very 6 easy question to answer. 7 And, the other fact, of course, is MR. PARKER: 8 that you can establish more terminals and that also 9 spreads your risk somewhat, but reduces your traffic 10 congestion. 11 You can establish more terminals? MR. DORSCH: 12 MR. PARKER: Yeah. 13 MR. DORSCH: I, I.... 14 MR. PARKER: Or, you know, you can establish 15 more deep water, more offshore terminals, more single 16 point worrying systems, whatever. There's ways of 17 18 spreading. MR. DORSCH: There is. That's a -- from a 19 practical standpoint I don't know if that's possible in 20 today's environment. Not my backyard seems to be the 21 current thinking. Offshore oil terminals have their own 22 attendant risk, you know. I think that offshore oil 23 terminals are much more subjected to weather and I think 24 the potential for oil spills is higher yet than it is in 25 127

1 an inland oil spill terminal --

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MR. PARKER: Well, yeah....

MR. DORSCH: Spreading the risk, spreading your terminals, it's a bit of a premium right now and I don't think you are going to find any state that is going to encourage more oil terminals than less terminals.

MR. PARKER: I think, you know, the point is
the sizing the ship to the trade it's in is what needs to
be done. And, whether some ships have been oversized for
the ports habitually frequented is -- oh, should be
strongly considered.

MR. WENK: Just very briefly, Mr. Chairman. 12 I think that when you deal with the question of size 13 merely the total volume of imports and so on over a number 14 of equally sized ships, may really not get to the point of 15 the question that I think Commissioner Herz was driving 16 at, and I think to dramatize it a little bit further, if 17 my information is correct we have had some new LCC's tie 18 up at the offshore loading/unloading in the Gulf of 19 20 Mexico.

21MR. DORSCH:That's the terminal in Louisiana,22yeah.

MR. WENK: One of which I think ran 477,000
tons and it strikes me that there really is a serious
question about size limit that you can approach without

128

getting down to this matter of just averaging everything out and coming to some general conclusion. I think that, if I may suggest it in terms of dealing with the issue of size limit, that one had to approach it somewhat differently than simply this question of how many more tankers you'd have if they were smaller size.

7 MR. PARKER: Okay. Any other questions.
8 Esther?

MS. WUNNICKE: Chairman, my question Mr. is, 9 maybe somewhat off the topic. But, we appreciate your 10 You know, as you say you are not a part of the coming. 11 American Petroleum Institute. But, the experience that 12 you have in Chevron dealing with American vessels as well 13 as foreign vessels. Would there be any merit in the 14 shipping companies making a part of their contract 15 standards with foreign flag vessels the same kinds of 16 recommendations that they make for U.S. vessels. Because 17 I think we are all grafting with the problem of some of 18 this being out of the jurisdiction of the United States. 19

20 MR. DORSCH: I agree with you entirely on that. 21 Yes, there is benefit to doing that and the actual factor 22 is that there is efforts to do that already. When we 23 charter in a ship we go through a rather extensive review 24 process of that ship and it's owners. We require him to 25 belong to certain conventions, insurance conventions. We

129

require him to have certain equipment on board these 1 ships. We require him to have a number of mooring lanes, 2 proper type, that meets our personal approval. We review 3 what type of ship he has. But, no we don't want to transport our oil on a ship of a questionable character. 5 We review the owners tract record and we also review his 6 accident record through Lloyds of London regarding his 7 accidents and casualties. Decide if that's the type of 8 ships we want. Q

10 That can be further expanded to incorporate some 11 of what you are talking about here, yes. And I think 12 that's probably appropriate.

MR. PARKER: Any other questions? 13 MR. DORSCH: Well, thank you for having me..... 14 MR. PARKER: Thank you. 15 MR. DORSCH: .....and I'm sorry I took so long. 16 MR. PARKER: Well, Commissioners you've run out 17 of your lunch period. What do you want to do? 18 MR. HERZ: Eat. 19 MR. WUNNICKE: Next time I am bringing a doggie 20 bag. 21 MR. PARKER: Do we want to send out for 22 something or do we want to delay the whole afternoon? 23 MR. WENK: Why don't we send out for someth-24 ing? 25 130

I think our best alternative is to MR. PARKER: 1 send out for sandwiches and keep on schedule. 2 MR. HERZ: Can we take the time of 15 3 minutes? 4 MR. PARKER: Oh, yeah. We're gonna do that. 5 But, .... 6 MR. HAVELOCK: Well, we'll send out for some 7 sandwiches, then. Is that it? 8 MR. PARKER: Yeah, that's it. 9 (Off the record) 10 LUNCH 11 (On the record) 12 MR. PARKER: Alright, Mr. King. 13 MR. KING: For the record, my name is Richard 14 King. I am with United Cook Inlet Drift Association. Τ 15 have with me Loren Flagg from the Kenai Peninsula Fisher-16 men's Association, as well as Ken Casnor, from the North 17 Pacific Fisheries Association. 18 MR. PARKER: Are the mikes on? (Referring to 19 PA mikes). 20 MR. KING: Testing, hello? 21 MR. SUND: Just speak up. 22 MR. KING: Okay. Between the three of us we 23 are going to give you, we hope, a comprehensive final 24 overview of what we think should happen in Cook Inlet. 25 131

I'd like to start -- I did start by passing you our 1 recommendations. We have come before you before with 2 these recommendations. We have refined them a little bit. 3 Two reasons. Well, we have a multitude of reasons why we 4 think these recommendations should be considered. We are 5 still uncomfortable with the fact that what seems to be 6 good enough for Prince William Sound isn't good enough for 7 Cook Inlet in the eyes of the Department of Environmental R Conservation and we would urge you to consider our 9 recommendations and consider the reasons why we think they 10 are good enough for, at least a start, for Cook Inlet. 11

We feel like there seems to be an international double standard in terms of the Industry and how they deal with their prevention and their response capabilities in Cook Inlet. And in Alaska in general, when it's compared to other places around the world. Loren will go a little further on that when he describes his trip over seas to some other oil terminals around the world.

19 I'd like to go back in time a little bit about the 20 time that you guys came down to Kenai and what has shook 21 out since that time. There has been a variety of develop-22 ments there. One thing that happened was the Department 23 of Environmental Conservation created a position in the 24 Anchorage office to deal specifically with Cook Inlet 25 which was a positive step in our mind and in doing that

132

DEC invited the industry, the Cook Inlet oil industry and 1 the shippers to address a list of concerns that they had 2 concerning prevention and response capabilities in Cook 3 Those recommendations as far as an agenda and Inlet. issues that they asked the Industry to review, of course, 5 center around putting an emergency response vessel or 6 vessels on line and, I guess what I would like to do is go 7 back through and tell you what the Department Environmen-R tal Conservation asked of the Industry and then review 9 what I feel is having happen. 10

What Joe did, Joe Sontner (ph) who is the new 11 Department Environmental Conservation person, is he gave 12 them an agenda that he would like to have addressed and a 13 supplement to that. The first thing that he was inter-14 ested in talking about was station response vessels or 15 tugs in strategical cases around Cook Inlet. Industry got 16 together on October 5th. They came out with a new 17 I think, Dennis, you were a party to that release. 18 meeting and are undoubtedly current on what they came out 19 with in terms of what they thought was necessary. 20

In a response vessel, as it shook out, was a boat called the Gulf Coast 69 and it was to be on line in Cook Inlet as of November 1st and it was suppose to be able to deploy 500,000 feet of oil boom. The standby ready response personnel and primarily I think it's used as a

133

response tool as opposed, or in their minds, a response tool as opposed to a prevention tool. It's also rated for ice operations.

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On Thursday, November 9th, I drove out to Rig Tender's Dock and took a look at the boat. At that point 5 there was crew of three on deck with steam thawing 6 equipment trying to get ice off of the boat so that the 7 vessel could be loaded with the equipment and while I Q certainly wasn't -- I didn't wish the Industry and bad 9 luck in terms of their progress on this thing, I think it 10 is indicative of the overall attitude of the Industry and 11 their agenda for getting on with the business of preven-12 tion and response in that ten days after it was supposed 13 to be on line these guys were struggling at the Rig 14 Tender's Dock trying to get this boat even clean or 15 cleared of ice before they could put the equipment that 16 was necessary to do the job on the boat. 17

I sure wouldn't have wanted to have been in their 18 position if the boat was moving around. It was 3 foot sea 19 state and a steady 20 knot wind. It was boiling and it 20 was maybe 19 degrees outside and I quess the bottom line 21 was that the boat was icing as fast as they were de-icing 22 and the progress was -- there was none. In their news 23 release they mentioned that it would be rated for ice 24 25 operation. I'm having a hard time believing anything's

134

going to be able to operate in terms of prevention and
response in Upper Cook Inlet under the conditions that I
saw last week on November 9th. It was bad weather -- bad
wind, icing conditions and just a bad situation to be
working.

However, in the background as you look at Rig Tender's Dock from the North side you see the Kenai Pipeline Dock and there with the ARCO River (ph) unloading or loading oil, whichever was they were doing. And, again, I think that speaks for the Industry's attitude.

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I believe that if the Department Environmental Conservation would have said "okay, guys, as soon as you get this vessel, the emergency response vessel together, you can go back to work at loading your tankers". Their attitude would have been considerably different in terms of dealing with the prevention and response vessel.

And, this goes back to my original request that
you take a look at making recommendations that EO -Emergency Orders be used here in Cook Inlet similar to as
they have in Prince William Sound.

One of the things that I didn't notice on the Gulf Coast 69 was a (indiscernible) package of any sort or a push/pull capacity -- equivalence to do so. If the emphasis is going to be on prevention, then it again needs to be there for those guys to be able to get ahold of one

135

of those tankers that's in distress and hold on to them 1 until they can either get back onto power or some more 2 equipment can be brought on line to help hold onto it. 3 I'm certainly not comfortable with the Industry's position 4 that if they have a distressed tanker they can drop the 5 hook and hold it. Everybody knows that the Glacier Bay 6 was on the hook when he went on the rock. The Exxon 7 Houston was on the hook -- the (indiscernible) over off 8 the Coast of Hawaii when he went on the rocks, or when he 9 broke his gear and eventually went on the rocks. 10

I think that if that's going to be a primary component of the prevention plan, then you need to get some expert opinions from perhaps the pilot in terms of anchoring up in different conditions. Particularly in Cook Inlet where the tides are running so hard.

And the last thing that I want to talk about that 16 particular boat, was the 5,000 foot of expand BC boom that 17 they intend to put on it. While I don't really know what 18 the capacity of a vessel like that is to set boom and to 19 handle it once it's in position, I have read some reviews 20 of expand booms primarily by the Department Environmental 21 Conservation. They have serious questions in their minds 22 whether Expand DC Boom can operate in 3 meter state which 23 is very criteria that they set in Prince William Sound for 24 the operations of safe boom. So. 25

136
Oh, you might notice in our recommendations that 1 we made a recommendations that on-sight capabilities in 2 terms of boom should be 30,000 feet. I pulled that right 3 off the DEC Emergency Order. The 30,000 feet seems to be a criteria that's been established in other places around 5 the world and places where they appear to have the role 6 model prevention plans. One thing that I have noted in a 7 review of that emergency order in the industry's response R to that order over in Prince William Sound, was that Dan 9 Long noted in his report that when the Valdez guit leaking 10 the perimeter of the spill was 18 miles. So, that's 11 approximately 95,000 feet and all I am suggesting is that 12 the industry feels comfortable with a figure of 5,000 13 feet, then maybe they ought to take another look and at 14 least consider some of the other aggregate booming 15 capacities that are around the world. 16

One of the -- the second of the Industry's seven point plan that they are interested in manifesting is that a committee of oil industry members to develop specifications for long term vessels.

I really feel like, again, they need to look to criteria established by outside resource, perhaps Foss (ph) Tug and Barge. They put out volumes of information what will and won't work in different C states and different weather conditions. They made one positive step

137

in my mind. All vessels inward and outward bound to and 1 from the Kennedy Entrance will maintain 25 mile clearance 2 from the Southern Coastline to the Kenai Peninsula. That 3 I think is pretty positive. I really feel like staying 4 off that beach, off of that outer district coast line is 5 important. I think that if they have a tanker in distress 6 that's 25 miles off, they are probably going to need to 7 have their response vessel or their tug vessels in either 8 Seward or Homer. 9

You will notice that in our suggestions or our 10 recommendations. Before we had specific amounts of tugs 11 in specific places. Now, we have backed off of that and 12 decided that the appropriate way to deal with it is to ask 13 them to respond in a two hour timeframe, because that's 14 what they are doing in Prince William Sound, again. They 15 are saying that if you can respond in two hours then you 16 can have as many of them as you need. Or, the inverse. 17

I noticed and I think -- I noticed that in Solum
Voe in Scotland two hour response capability seems to be
fairly common numbers to work with. So, I think that
again, if it's good enough for Prince William Sound it
should be good enough for Cook Inlet.

The next component of their seven point plan is the continued work with the organization and further investment of equipment. One thing that they say is that

138

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they are going to define worldwide resources available by 1 air to quickly respond to major incidents. I have a 2 little bit of problem with that only from the standpoint 3 that if the two hour time perimeter is going to be used then flying out of wherever it is they'll have to bring 5 that equipment from into Kenai, or Homer, or Seward, 6 certainly doesn't allow them to stay within the two hour 7 timeframe that we are looking for. R

One thing that I noted. I took the \$.10 tour of Q CIRO here a couple of weeks ago. I looked at their 10 inventory and their equipment and I talked to some of the 11 quys that were working there. They were basically working 12 on equipment to get ready for the response vessel. Thev 13 were going to pull the boom and the skimmer as well as 14 some of the other components vital to the operation of the 15 emergency response vessel off of the shelf. They do seem 16 to have a fairly comprehensive inventory of response 17 equipment there. One thing that I did note was a ton of 18 I'm not sure I'm comfortable with, again, the curexit. 19 attitude of the Industry in that right way to deal with 20 oil spill is to dump curexit on it. Certainly there are 21 weather perimeters that have been established that are 22 going to keep the use of those disbursants from being the 23 primary source of response for a major portion of the year 24 up in Upper Cook Inlet. And in any sub-arctic conditions, 25

139

for that matter.

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And, the last thing, the last thing that they 2 mentioned as far as a direction action that they would be 3 willing to do is to work with the Department Environmental 4 Conservation in assuring requirements that all vessels 5 have approved Contingency Plans before they can be allowed 6 to move cargo. Well, it was not but two weeks later that 7 the San Finino Two (ph), of course, was held up and made Ø to wait on the hook, because they were operating without 9 an approved Contingency Plan in State waters. And, it 10 wasn't the Industry's self-monitoring that made that 11 vessel stay off -- it was the addition of that extra man 12 in the Department Environmental Conservation. He went 13 through the books and he found that the vessel wasn't 14 operating with an approved Contingency Plan. 15

So, I'm having a hard time believing that they are 16 very sincere about that, at least at this point. They 17 promised as well to organize all interest groups, all user 18 groups, in the Cook Inlet drainages and provide a form 19 that could serve as a policy and education tool for the 20 citizens in the area. Well, I guess submit to this Board 21 that the education tool should be for the Industry 22 themselves to find out that the citizens of this area are 23 not comfortable with the pollution problem that the 24 industry has. And, in my mind anyway, if they don't get 25

140

a handle on the pollution problems, sooner or later they
are going to be regulated or legislated completely out of
business. That information needs to go two ways. It
needs to come from them as well as to them.

There was a multitude of requests by DEC in asking 5 them to participate in this meeting that weren't ad-6 Those are skimming capacities, booming capacidressed. 7 ties, lightening storage, weather conditions, minimum 8 weather conditions, spill drills, risk assessment, oily 9 waste disposal, research and development. To date I 10 haven't read where the Cook Inlet Industry has been 11 dealing with any of these things even though I did learn 12 something today from Steve in terms of the R&D plan. 13

I guess the bottom line in my mind is that if we 14 continue to let this Industry monitor itself and be 15 responsible to the people in a way that their record has 16 indicated their going to be, it's not unlike me -- when I 17 make request of this sort and I don't take these recommen-18 dations lightly, it's not unlike me telling my nine year 19 old daughter to clean up her bedroom and after making her 20 bed she comes back to me and says "well, I'll do my dirty 21 laundry if I can go play for a little bit longer". I make 22 this analogy because it has such an affect on my life and 23 my relationship with my children and it has for the last 24 three years. In '87 we dealt with the Glacier Bay, in '88 25

141

we had a spill of unknown origin in Upper Cook Inlet and 1 obviously in 1988 we were put out of business in complete-2 We got our paychecks alright, but we stood in line ly. 3 for our paycheck. And, my nine year old daughter got her 4 crew share, but she didn't earn a dime of it. And, it 5 goes every work ethic that my father ever taught me to be 6 in this position. And, that is why, in my mind, at least 7 personally I'm here. 8 So, I'll end it with that and if you have ques-9 tions about our recommendations, please feel free to ask 10 them. I'm sure that your recommendations are going to be 11 a lot more comprehensive than mine are. And, I would 12 happy to help in anyway that I can. 13 MR. PARKER: Thank you, Rich. Okay. Commis-14 sioners, any questions? Counsel? 15 MS. WUNNICKE: Thank you. 16 MR. PARKER: Okay. We'll go over your revised 17 one and I'll see you again before too long. Loren? 18 Loren Flagg. Kenai Fishing Peninsula Association 19 and just back from Norway. Welcome. 20 MR. FLAGG: Thank you, Mr. Chairman. Т 21 appreciate the opportunity for the Commission to hear the 22 Cook Inlet Fishermen here one more time. Hopefully, we 23 will have a few new things to add here to the process. 24 Two years ago I retired from the Alaska Department 25 142

of Fish and Game after working 19 years as a fisheries 1 biologist in the Cook Inlet area. In 1973 I was the area biologist for Commercial Fisheries in Homer when the State 3 of Alaska leased portions of outer Kachemak Bay and adjacent lower Cook Inlet for oil and gas exploration. Concerned for the threat to the valuable fisheries resources and environment of the area resulted in the legislature funding a comprehensive baseline study of the marine environment of Kachemak Bay and Lower Cook Inlet. 9

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I was transferred to the Habitat Division at that 10 time and became field project leader for the studies. At 11 the same time I was responsible for investigating oil 12 spills and reviewing oil spill contingency plans for ADF&G 13 in the Cook Inlet area. 14

I would like to take just a few minutes to relate 15 some personal experience from this period in hopes that by 16 remembering the past we can gain better control of our 17 future. 18

Some of you may recall the George Ferris (ph), an 19 oil drilling rig which was used in Cook Inlet in 1977. 20 After experiencing mechanical problems off of Cape 21 Caseloff (ph) in the Fall of 1977 it was moved down to 22 Kachemak Bay for repairs and winter storage. When the rig 23 became stuck in the Kachemak Bay mud and the tide began 24 flooding over it's decks, the oil spill containment boom 25

143

on board was covered by water and not available for 1 deployment. As the ferris began to sink, containment boom 2 and all, oil began to escape from the fuel tanks and since 3 there was no contingency plan to cover this event, the oil escaped to the Bay. The oil was not contained until the 5 second day due to a comedy of errors. The first boom to 6 finally be deployed around the ferris was not of the heavy 7 duty deep skirted variety suitable for ocean use. It was 8 a flimsy piece of equipment that was unable to contain 9 this relatively small spill, even under ideal conditions. 10

I personally observed the clean up operations from an airplane above and could plainly see oil freely escaping under the boom. At the time the seas were calm. The second boom was brought in. This was one of the heavy duty variety. However, this boom had a leak and when it was deployed it gradually filled with water and eventually sank.

Well, while oil continued to escape and spread
around Kachemak Bay a third boom was rushed to the scene.
However, this boom arrived still heavily coated with oil
from a previous spill and could not be used.

Oil spills in offshore waters present a far greater challenge than the Ferris which took place in the relatively calm waters of Kachemak Bay. There's only one chance of containing an oil spill in Cook Inlet. There

144

must be an adequate amount of the best available equipment 1 that technology can provide located at strategic response 2 stations available for immediate deployment. There must 3 also be trained response teams at the sites which can be 4 activated immediately. A delay of more than one hour --5 one or two hours before booms are deployed is too late as 6 the tides and wind disburse the oil over too large an area 7 to allow containment. We learned this in 1987 with the 8 Glacier Bay and, of course, again this year with the Exxon 9 Valdez. 10

Initiating these measures may give us some chance of preventing oil from reaching our shores. However, we should all be aware that even with these types of measures we are still going to need luck on our side. Equipment and response strategies have not yet been developed capable of containing oil on the ocean on the open seas during rough weather conditions.

This point was underscored to me recently while I 18 was in Norway attending the first International Conference 19 on Fisheries and Offshore Oil Exploration. You have all 20 heard how advanced the Norwegians are in the field of oil 21 spill response capability. They have the most technically 22 advanced booms and skimmers in the world. The state 23 pollution control authority has an extensive network of 24 people and equipment located at 12 depots along the 25

145

Norwegian Coast. They have a total clean up capacity of 15,000 barrels per hour. At each depot there are ten trained people assigned on an on-call basis.

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In addition to SPCA, the oil companies have formed 4 a clean up co-operative called NOPO (ph) made up of 13 of 5 the major offshore oil exploration and production com-6 panies. Each of these companies have the requirement to 7 be able to clean up 60,000 barrels per day in 3 meter seas Q with a 1.5 knot current. Each oil platform must have 9 skimming capacity standing by to respond, to contain and 10 pick up a minimum of 600 barrels per hour. All within two 11 hours while the equipment is on route. NOPO has five 12 strategically located bases along Norway's west coast. At 13 each of these bases are 27,000 feet of oil booms. 14 oil 14 recovery and transfer systems with a capacity of 26,500 15 barrels per hour and 12 sets of disbursants units. 16

In addition to SPCA NOPO the oil terminals in 17 Norway are also well equipped with oil response equipment. 18 I visited the Stir (ph) Terminal to which is Norway's 19 newest facility at the Osborn Pipeline. The spills 20 adjacent to the terminal and out to the entrance of the 21 fjords, response must be within two hours with the 22 capability of picking up 36,500 barrels within 24 hours. 23 All the above sounds pretty impressive. In fact, 24 on paper it would appear that even a spill the size of the 25

146

Exxon Valdez could be picked up in less than two days if all of this equipment were pooled. So, what happens in a real life situation.

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While attending the conference in Bergan, Norway, I had the opportunity to observe how the best available 5 technology and the best available strategy really works 6 when the sea kicks up. The opening day of our conference, 7 the morning newspapers headlined the story entitled, R "Disaster Tanker On The Rocks". Some of the Norwegians 9 heading the conference had to leave to respond to a medium 10 size oil spill just a few miles up the coast near the 11 entrance to Sonja Fjord. There were 30 knot winds and 8 12 to 10 foot seas in the vicinity of the tanker. Which had 13 broken in two and was leaking bunker sea fuel. Due to 14 weather conditions, very little of the oil could be 15 contained or recovered for two days following the acci-16 dent. The oil was driven ashore into the Fjords by winds 17 Mariculture farms, sand and streams, marine and tide. 18 birds, and private properties were all threatened by the 19 spill. Most of the oil ended up on shore and an extensive 20 clean up expected to last several weeks was begun. The 21 press was critical of the Norwegian Government in the oil 22 industry for it's slow and inadequate response. 23

Mariculture owners were scared there was not enough containment boom to protect the salmon.

147

Audubon folks scrambled to set up bird recovering cleaning stations. Private property owners threatened to sue government and industry for failing to contain the spill. Does any of this sound familiar?

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The point I am trying to make here is that 5 prevention cannot be overemphasized. The Norwegians with 6 the best equipment and response capabilities in the world 7 could not control this relatively small spill. Once the Q oil is in the water, especially in Cook Inlet with the 9 extreme range of tides and excessive tidal currents, the 10 ballgame is over. This should be painfully obviously to 11 anyone who is involved in the clean up of the Exxon Valdez 12 All of the best equipment and response plans in spill. 13 the world are not going to do any good at all under 14 certain conditions. 15

Recognizing this we must all work to designing and 16 implementing the best protection plan possible for Cook 17 Inlet and other areas of Alaska. The seven point plan 18 recently outlined by the oil industry for improvements in 19 Cook Inlet is a good start, but just that. A start. Ι 20 believe that you see these recommendations that Rich has 21 outlined are reasonable and definitely worthy of serious 22 considerations. 23

I have had a chance to briefly examine ECO's (ph) report on Assessment of Transportation Systems in Cook

148

Inlet and Prince William Sound. Walt had brought down a copy on Friday night at a discussion in Homer and we had a chance to look at it over the weekend. For the most part I believe this is a very good report and KPFA supports ECO's recommendations for improvements in Cook Inlet.

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I would like to end with just a few comments on this report and a few recommendations for your consideration.

I strongly disagree with any policy that One. 10 does not allow Alyeska's oil spill response equipment to 11 be used in Cook Inlet. Refineries in the Cook Inlet area 12 are receiving Prudhoe Bay oil from Valdez on a regular 13 basis. And, a thus and instate extension of the Trans 14 Alaska Pipeline. It is imperative that agreements are 15 worked out ahead of time to allow full use of this 16 equipment in the event of a major oil spill in Cook Inlet. 17

Two, the concept of a state port authority with 18 powers to close down ports if conditions are unsafe must 19 be given serious considerations. The port authority and 20 operational quidelines should be modeled after Solum Voe 21 in the Shetland Island. Local citizens, fishing groups 22 and other local interests must be involved in the process 23 of oil spill prevention and contingency planning. Support 24 is needed, right now, for the oversight and monitoring 25

149

amendment by the Senate and now being considered a preconference committee in Washington, D.C.

Three. I was disappointed that ECO's report which included a section on improved tanker design did not address the vacuum method designed by Sweden to minimize escape of oil from damaged cargo tanks. The vacuum method or emergency cargo transfer system, would have greatly reduced the outflow of oil from the Exxon Valdez according to Swedish Naval experts.

I would ask the Oil Spill Commission to recommend 10 to the State, Federal and Industry planners to seriously 11 Last month, Christenson, from the examine this method. 12 National Swedish Administration of Shipping and Naviga-13 tion, reported to the International Conference on fisher-14 ies and offshore oil exploration that the major, technical 15 and safety problems regarding this method have been solved 16 during the past two years. A series of reports and a 17 video on this method are available from Mr. Christenson. 18 I have his address and phone number if you are interested 19 in that. 20

0il tankers presently in use in Alaska could be
converted to take advantage of this new technology. The
vacuum method should also be employed in the design of any
new tankers in Alaska.

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Four. All tankers transporting petroleum pro-

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ducts in Cook Inlet should be equipped with towing
 packages. This is now a requirement in Prince William
 Sound.

Five. An anchor system inspection program should be carried out by the U.S. Coast Guard on all tankers transporting petroleum products in Cook Inlet. The recent accident in Norway and the accident in Hawaii earlier this year involving an Exxon tanker, point out the need for this action. Both of these accidents were related to anchoring problems.

Six. ECO has recommended that two emergency 11 response pollution control vessels be provided for Cook 12 Inlet. KPFA recommends that a third vessel of this type 13 be considered for Seward. The cost of this vessel could 14 be shared with Alyeska since Seward is approximately 15 midway between the pipeline and Cook Inlet refineries. At 16 a minimum, a standby contract with an ocean going tug or 17 capable response vessel in the Seward area should be 18 negotiated. Without this response time to the outer coast 19 of the Kenai Peninsula, including the Kenai Fjords 20 National Park, could be too long to assist the tanker in 21 distress. 22

And, finally, I believe that the oil industry in
Cook Inlet should either greatly expand CIRO's (ph) role
in oil spill response or form a new organization with more

151

emphasis on shipping concerns. We need a single entity 1 similar to Alyeska to represent Cook Inlet Industry to 2 cooperate with state, federal, borough, city and citi-3 zen's groups in planning for future improvements in oil 4 spill prevention and response. 5 And, I'd be glad to answer any Thank you. 6 questions. 7 MR. PARKER: Thank you, Loren. Are you going 8 to leave us a copy of your report? 9 Yes, I have a copy for you. MR. FLAGG: 10 Questions? Mike? MR. PARKER: 11 MR. HERZ: Do you have any figures on what 12 actually was recovered in that spill that you were talking 13 about in Norway? 14 I don't I left there about MR. FLAGG: No. 15 the third day after the spill. At that time there was 16 something like 38,000 gallons in the water with probably 17 2 to 3 times more that aboard the vessel and they were 18 expecting it all to break up and into the water. But, I 19 haven't followed up on that to see what the total amount 20 was. 21 MR. HERZ: Is your conclusion from what you 22 saw that even with the best technology their performance 23 was not that much better than what we have seen? 24 MR. FLAGG: Their performance was nil for two 25 152

days and it's strictly because of the weather conditions. 1 They weren't able to get out there to do anything. The 2 booms they have are designed to work in 3 meter seas and 3 that's about what they had, but there was just no way to 4 do anything. They could not put a container boom around 5 the vessel and the only thing they could do was to go to 6 some of the inshore areas, kind of like we did in the 7 outer district near Homer, and set booms here and there 8 and try to protect some of the salmon streams and some of 9 the critical habitats. But, as far as preventing any of 10 the oil getting away from the ship, they were pretty much 11 helpless for two days. 12

MR. HERZ: I think it would be valuable to us if there's anyway that with the contacts that you've had there that you could get a documentation, you know, a report that summarizes the performance that would be useful information for us.

18 MR. FLAGG: I'd be glad to do that. I have
19 some contacts to do that.

20MR. HERZ:Okay. Thank you.21MR. PARKER:John?22MR. SUND:Yeah. Loren, what's the average23current in Cook Inlet?

24 MR. FLAGG: I believe there's some figures in
25 the ECO report. I'm not sure what the average was. They

153

mentioned an extreme of about 8 to 10 knots. I would 1 quess average tide and so forth, you are looking at maybe 2 4 to 6. The upper Inlet and probably something less than 3 that in the lower Inlet. Do you know of any boom that will MR. SUND: 5 work in excess of 1 or 1 1/2 knots? 6 MR. FLAGG: There's no boom that's gonna No. 7 work in over about 1.5 knots in a stationary fashion. 8 Now, you can deploy a boom and float with it. You can go 9 with it in that kind of a current, but you cannot hold it 10 at any kind of an angle in that kind of current. 11 MR. SUND: So, your recommendations is just 12 to get boom that you could put in a circle and float along 13 with oil, then. 14 MR. FLAGG: I think that's almost mandatory in 15 Cook Inlet, except at slack tide which is a very short 16 period of time. As I understand, the operation procedure 17 in Cook Inlet, that the vessels being loading and not 18 boomed as they are in Prince William Sound just because 19 they can't, doesn't do any good. 20 MR. SUND: The point I was getting at is that 21 all the available technology says it doesn't do any good 22 so why do we even bother to stock boom? 23 MR. FLAGG: Well, I think.... 24 MR. SUND: Isn't it kind of useless? 25 154

Yeah. I think one reason to MR. FLAGG: 1 stock boom is that it can be used to protect critical 2 habitat areas. Salmon streams and, you know, bird 3 sanctuaries and these types of things. It can be used in Inshore, but as far as out in the Inlet, most situations. 5 the only application that I see is being able to move with 6 the oil. You know, you surround it with two vessels. And 7 you go with it, the skimmer goes with it. It's not a 8 matter of pulling it in one place and being able to skim 9 it up. 10

MR. SUND: Thanks, Mr. Chairman.

MR. PARKER: One second. The most graphic demonstration you can have of Cook Inlet currents is to be on a tanker, either L&G (indiscernible) -- it's just absolutely one tight and requiring, you know, two-thirds power just to hold it against the current. It's a tough port.

Go ahead, Mike.

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MR. HERZ: You mentioned that you had been 19 involved in supervising the baseline studies -- the 20 characterization reports. And, you mentioned that you had 21 reviewed the ECO report. I was very struck by the fact 22 that the ECO report, number one, makes it sound as if 23 relatively little is known about the current regimes in 24 Cook Inlet and, number two, there was no discussion of 25

155

characterization of habitats, identification of sensitive 1 From your perspective, is there more now than habitats. 2 was reflected in that and, secondly from our perspective, 3 it is very important to know what the State of Art is in terms of identification of sensitive habitats and mitiga-5 tion measures that can be laid out in advance. So that if 6 you have a limited amount of response capability, contain-7 ment booms and recovery equipment, where do you deploy it. 8 Because you don't want to waste your time going to the 9 vessel. You want to go to the place where you are going 10 to prevent the damage from occurring. 11

Do we have enough information to do that job right?

Yeah, I think I saw this as one of MR. FLAGG: 14 the weaknesses of the ECO report, and I'm sure it's just 15 a matter of the time that they had to put that kind of 16 report together. They did not get into the environmental 17 sensitivities of Cook Inlet. All that information is 18 available through Fish and Game Habitat Division. There 19 is a whole series of reports. Some of them from the OCS 20 days identifying all the salmon streams, all the crab 21 spawning areas, critical habitats. There's also a very 22 comprehensive study done of circulation patterns in Cook 23 Inlet that's contained in those reports. That show the 24 current transport system in Cook Inlet. How the water 25

156

enters the Inlet and how it filters around. That was one
of the things that I had questions on for them -- they had
showed models of a spill in Mikisski (?) coming back on
the east side and into Kachemak Bay. And, from my
understanding of the currents, the general transport would
not result in that type of movement.

Now, maybe under certain wind conditions it could.
But, yes, the short answer is -- all that information is
available in Fish and Game who I believe you are going to
hear tomorrow. They have volumes of information on Cook
Inlet.

MR. HERZ: A related question is -- if that 12 information is available then it should be integrated into 13 this -- CIRO have an overall contingency plan which takes 14 segment by segment the shoreline, inlet and talk about how 15 you can -- what you can do to protect those segments and 16 does it prioritize the segments and so on. Is that --17 does that work exist. 18

MR. FLAGG: CIRO has a fairly comprehensive
plan that has some of that in there. I haven't looked at
it for some time. I can't tell you how comprehensive, you
know, how finally it's broken down into area. But, they
do have a plan on file.

24 MR. HERZ: There are people who are residents
25 of Cook Inlet and connected with the fishing industry

157

there. I would think that would be prime importance.
Somebody must have reviewed to a degree to which CIRO plan
does in fact speak to protecting areas that do -- Do we
have any information? Have we gathered any information on
that?

MR. PARKER: It's the Department of Environmental Conservations' responsibility to review that plan. I
don't know if they -- if you ever asked them that specific
question. You were here when they were before us.
Dennis?

MR. DOOLEY: At the CIRO meeting that Ι 11 maybe Loren and I are talking about two attended, 12 different instruments, but CIRO was pretty clear that they 13 are an equipment depot. Other people have the plan. Not 14 CIRO themselves and other people will provide the manning. 15 Other people have their view of what the response was. 16 They are an equipment depot and that came across pretty 17 clearly at the CIRO meeting. And, I not aware that CIRO 18 itself has a massive contingency plan as such for Cook 19 They do have some familiarity with it, but they Inlet. 20 pretty much said it's up to the spillers to have his plan. 21 MR. HERZ: I have to plead complete ignorance 22 about Cook and it's only because we have the ECO report 23

24 deal with probabilities of spill there, but I was struck
25 by the fact that the other side of that issue is what are

158

the resources that need to be protected and is there
adequate information? I don't know if that's within our
scope or not, but it certainly seems like a relevant
question that should be addressed.

That's not within MR. PARKER: our scope 5 because of the massiveness of the detail. The -- we'd 6 probably be talking about several large volumes to 7 identify all of the environmental resources in Cook Inlet 8 that you are going to have to think about. Certainly, 9 several hundred salmon streams and shell fish habitat and 10 it would be a massive job. 11

I'm not even sure that's within the scope of the State's \$650,000.00 contract that DEC is negotiating on contingency plan review. I don't think it is.

Any other questions for Loren?

MR. FLAGG: Thank you.

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MS. WUNNICKE: I have a question, Mr. Chairman.
When you were in Norway you mentioned Solum Voe. Do the
Norwegian ports have a similar kind of authority? Over
tankers entering their ports?

MR. FLAGG: I don't believe that their system
or prevention is quite as good as Solum Voe's. They have
probably a better -- they have better equipment. They
have more equipment and trained response teams. Their
capability for cleaning up and reacting to an oil spill is

159

probably better than Scotland's. But, I think the 1 Scotland program stresses more the prevention. They have 2 a very close tie with citizen involvement in that program. 3 And, they are able to get that by getting in on the ground floor early before terminals were built there and they had 5 some control of the land in the area where oil was to be 6 brought ashore. 7 MR. PARKER: Okay. Thank you, Loren. 8 MR. FLAGG: Thank you. 9 MR. PARKER: Captain Next have Robert we 10 Elsenjohn.... 11 MS. WUNNICKE: I think they have one more. No. 12 MR. PARKER: Oh, I'm sorry. I didn't know 13 that. 14 MR. CASNOR: Mr. Chairman, my name is Ken 15 Casnor. I'm with North Pacific Fisheries Association out 16 of Homer. Unlike the other two groups, our group is not 17 just exclusively salmon fishermen. We have a large 18 percentage of fishermen who fish halibut, crab and shrimp. 19 And, a significant number of fishermen that live in Homer 20 that fish over in Prince William Sound. 21 I'd like to touch on a couple of topics before I 22 get to the main point of my -- we certainly agree with 23 everything that was said by the other two fishing or-24 ganizations. 25

160

There's a lot that we don't know about the Cook 1 For example, I don't know anything Inlet oil industry. 2 about the decanting facilities over at Drift River. Ι 3 don't know how many gallons they put into the water every 4 day and I don't know how many parts per million of oil go 5 into the water from those decanting facilities. I do know 6 that at Valdez the decanting facilities are built for one 7 purpose only and that's to recover oil. They are not 8 water cleaning facilities. It is an oil recovery facili-9 ty. And, something that I don't think many people realize 10 about the Valdez facility is that every drop of water that 11 falls with the rain or snow gets pumped through that 12 facility. And, when you start talking about the volumes 13 of water that go through that decanting facility you 14 wonder how much oil is really decanted out and how much 15 has been pumped back into the water in Valdez. 16

All that is besides the point. There really is no 17 reason that we have to continue mixing oil and water as 18 We could either go to a double hulled tanker ballast. 19 system and include the ballast there or we certainly have 20 the technology to be put deep flatible or flexible 21 bladders into the existing cargo hulls and fill those with 22 sea water and then pump those out as you are putting in 23 oil on top of them. There's really no reason why we need 24 to keep mixing oil and water and then going through this 25

161

1 whole decanting process.

The ECO report -- I was really disappointed in the 2 ECO report in that when I went to the Table of Contents 3 and started looking at it there were a number of what I 4 thought very hot topics listed for each page. And, all of 5 this is on the same page as that. I knew that it wasn't 6 going to be anything like an in depth report. But, there 7 are a couple of things that I want to point out about 8 that. 9

First of all, I don't believe that all of the oil 10 that goes out of Cook Inlet goes to the West Coast of the 11 United States. I believe some of that oil goes down the 12 Aleutian Chain and has markets in the Far East, and Japan. 13 A spill along the chain would really have significant 14 Also, oil is not the only toxic that's consequences. 15 transported in Cook Inlet. Large amounts of ammonia and 16 liquid natural gas are also moved in volumes that are 17 significant to warrant concern both for environmental and 18 public safety. 19

The ECO proprietary model that they used has one failure. And that is the assumption that the oil stays on the surface. Commissioner Sund asked about corralling the oil and whether that does any good. Well, in 1987 there were short shots of boom floating up and down Cook Inlet with black centers in the middle of these donuts where the

162

oil was. You could fly over it one time and there would 1 be a lot of oil in there and you could fly over it again 2 Well, I think that it is sigand it would disappear. 3 nificant to remember that this oil gets neutrally buoyant A as it emulsifies. It became neutrally buoyant about the 5 fifth day after the Valdez spill and in fact, it became 6 neutrally buoyant and moved undetected across southern 7 Cook Inlet and then re-emerged in Shelikoff Strait as a 8 20-mile spill. Everybody seems to kind of forget that. 9 So, it's not always oil. When it gets emulsified it turns 10 into some other creature. 11

The other thing that I believe that people haven't 12 paid enough attention to is the fact that there's ex-13 pediential growth between the raw crude oil in this moose. 14 I heard one expert say that the volume increased by 30 15 times. I'm not sure if it's 3 times or 30 times, but when 16 you start getting engaged in a numbers game with the oil 17 industry, I think that it is something that is significant 18 and people ought to remember. 19

North Pacific Fisheries Association wants to urge
that stronger requirements for pilots, at least, to match
the requirements of the pilots associations be required.
We also believe that really should be a person like an
independent marine pilot that oversees the loading and
unloading of both and ballast water. That person will be

163

licensed by the state and would have mandatory inspection and reporting responsibilities.

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I heard on Friday night a suggestion that maybe the EPA should be the lead agency. It certainly hasn't demonstrated any desire to involve itself in oil clean up technology. But, then again it's silly to have one lead agency for water spills and another for land spills. And, so I would like to see one agency that takes care of all of this pollution.

Also, there should be more of a dichotomy of missions. Both for the Coast Guard and the industry. The very fact that there is a spill is a failure of their prevention mission. Why are the same players deemed competent to best handle the mission of containment clean up?

The delivery systems that bring oil from the North 16 Slope, Swanson River fields and upper Cook Inlet are for 17 most part systems that made up of several aging com-18 Pipelines, tankers, supply boats, oil rigs, ponents. 19 pumps valves, gauges and probes are all subject to failure 20 in time and it's only conjecture is to which one of those 21 failures will cause the next spill. So, while others are 22 stressing prevention, prevention, prevention, North 23 Pacific Fisheries Association would like to discuss 24 preparation for the next spill. 25

164

The Alaska oil spill occurred -- when the Alaska 1 oil spill occurred there were herring tenders in Prince 2 William Sound with hold capacity to carry roughly half of 3 the 11 million gallons that were on the water. Coast Guard regulations prevented pick up because they were not 5 certified and inspected as tankers. It wasn't until much later after the spill had spread to outside Prince William 7 Sound that the oil became so well emulsified it was declared a slug and ordinary boats were allowed to Q transport it. 10

We all agree that we don't need more unsafe 11 vessels transporting oil. But, we believe that there 12 should be a new class of boat and we just gave it the name 13 of Cue Class. Because there is no such thing as a Cue 14 Class. But, a Cue Class tanker -- Cue Class Tankers would 15 be inspected annually at an Alaskan point, have stability 16 papers and documents reviewed and be the first vessels 17 hired to help with the next spill. What that means is, if 18 I have a herring boat that I can go down do some demon-19 stration of my knowledge and stability of the vessel 20 itself and get that vessel prequalified to work on a spill 21 and to carry fresh oil that's on the water. Skippers of 22 Cue Class vessels would have to take part in mandatory 23 training exercises yearly in order to keep the vessel and 24 themselves on the priority hiring list. Skippers would 25

165

also have to demonstrate to the Coast Guard some basic knowledge of the conditions and geography of the area for which they are approved to work. You could consider it a semi-licensed position.

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Commercial fishermen are used to working with their hands in controlling gear under all conditions. It's a talent that working around the water demands. Such at sea training cannot be taught in the classroom or quite No piece of technology can supplant it either. harbor. Contingency plans that do not use the train resources at 10 hand is not a contingency plan. Contingency plan that 11 does not unleash all regional resources in the first 48 12 hours of a spill is also not a contingency plan. 13

Just one organization should be responsible for 14 all of Cook Inlet and another for Prince William Sound. 15 Those organizations should be responsible for the main-16 tenance and deployment of all the tools needed to im-17 mediately contain and recover the oil. If that means 18 pumps, then pumps have to be readily available. If it 19 means buckets and flower scopes, then those have to be 20 Those organizations should include readily available. 21 representatives from all the water users. Fishermen, 22 marine pilots, shipping operators and, of course, the 23 Industry, only organizations have proven Coast Guard. 24 those short comings. 25

166

The Commission should not recommend laws to 1 correct the faults of the current administration. Laws 2 that were enforced that inhibited the orderly clean up are 3 not necessarily bad laws, they were, however, laws 4 designed for purposes that paled in significance when 5 compared to the gross contamination of the spill. We 6 believe that those laws could have legally been overlooked 7 with a simple declaration by the Governor, but since there 8 was no such declaration, the enforces were only doing 9 their jobs. By those laws I am referring to 'is there an 10 outhouse on this beach where you are trying to take care 11 of things and such'? 12

In conclusion the cost of an oil spill is largely 13 the long and short term detriment of the coastal com-14 munities. Fishermen do not ever want to sit again idle 15 watching as an industry that is infatuated with high 16 technology fails to control and recover the oil lost in 17 the next spill. No amount of paperwork, correspondence, 18 plans, shoreside training or barrel disbursants can match 19 the weight and ingenuity of Alaska's commercial fishing 20 operators. They should be among the first employed not 21 held in reserve until all other attempts have failed. 22 While prevention is foremost in everybody's mind, prep-23 aration should at least be given equal billing. 24

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If the 1987 spill in Cook Inlet in the March

167

catastrophe that brings us here today teaches nothing 1 else, it is that preparation is the hardest aspect to 2 relate to in the first aspect to be shined on as time 3 It is not wholly to follow the industry, it's passes. 4 human nature to let things go like that. The weakest link 5 is the person who somehow fails in carrying out a plan. 6 We must discipline ourselves. Get trained, stay sharp and 7 be ready. Maintain the equipment and have it in a place 8 handy for fast employment. Only then can we dare hope 9 that the weather will be warm and calm and the spill to be 10 small and those that have been trained to be close by. 11

So, I thank you for your time and your patience in sitting through which is probably become repetitive testimony.

MR. PARKER: Thank you. Questions? Okay. 15 The shipments to Asia probably amount to about five 16 tankers a year according to my calculations, which is 17 enough to cause an oil spill. We only got about a tanker 18 every ten days out of Drift River now. And, I'm not sure 19 when the last time anybody went and inspected Drift River. 20 I guess we should find out. 21

Ahh, Captain Elsenjohn. Masters, Mates and
Pilots. Thanking you for making this 8-hour plus stops
flights to come talk to us.

CAPT. ELSENJOHN:

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Yeah, well, my pleasure

168

and thank you very much for asking me.

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I'm here today on behalf of Captain Robert Lowen, the President of Masters, Mates and Pilots. My name is Robert Elsenjohn. I'm the director of the Maritime Institute of Technology and Graduate Studies, which is a graduate school for ships' officers basically deck officers, masters, pilots, chief officers, second and so on.

I won't go very long in my experience, but I have Q held a Masters' license for 35 years. I was Master on 10 ship for 13 years in the Columbia River Bar Pilot, for 11 about 13 years and I've been back to the school for about 12 9 years. I've been Master on tankers, freighters, the 13 whole mess. So, I think I am qualified to speak a little 14 bit in the area that I would like to talk about today. I 15 am not going into the Exxon Valdez situation. That's been 16 beat to death by experts. 17

I would like to talk about prevention, basically. 18 And, the Master, Mates and Pilots position with regard to 19 that. We feel that adequately trained personnel and the 20 proper numbers of personnel on ships answer a portion of 21 the prevention problem. I don't know if you are ever 22 going to be able to completely prevent oil spills anytime 23 you are moving or handling oil around areas. We believe 24 that there should be four licensed deck officers on the 25

169

vessel in addition to the Master. Three watch standing 1 officers, the second and two-thirds, and a chief officer 2 whose responsibility is the cargo and the maintenance of 3 the ship. When a ship comes in port and is loading and 4 discharging, the chief officer is the man who is in charge 5 and responsible and up and rested. He has the assistance 6 of the other officers. You don't have watch standing 7 officers who maybe tired from navigation and confined 8 waters or restrictive visibilities either coming in or 9 going out trying to handle the ship. The incident in Cook 10 Inlet -- I'm sorry, in Prince William Sound, indicated 11 that they may have been a fatigue factor. I am a member 12 of the National Academy of Sciences Marine Board doing a 13 study now that's ongoing for the last two years with 14 regard to fatigue of ships' officers. And the result in 15 casualties related thereto and reduce crews. And, one of 16 the interesting -- we have no conclusion in that as yet, 17 but we should have a report out in January. 18

An interesting thing. There was an oil spill off 19 Providence or Newport, Rhode Island, in early October or 20 Nearly 300,000 gallons of heating oil. September. The 21 Master on the ship said that he had gone 36 hours with 22 little sleep, had no look out, was overworked and dis-23 tracted at the time of the incident. He said he had seen 24 the buoys, but he didn't really understand, he couldn't 25

170

understand why he didn't react or respond to them. We 1 feel that fatique may be a factor there. He said he had 2 sent his chief officer below to calculate how to unload 3 the cargo in Providence. The Second Officer was down helping the pilot get aboard. I don't know where the 5 third officer, if indeed they had one, was. But, there 6 were only, as we understand, three officers on the ship. 7

I said an adequate number of people, properly trained people are another point that we think is very valid. One of the things that we are stressing at the 10 Maritime Institute and have for the last several years on 11 our ship simulators is Bridge Management and Bridge Team 12 Training. 13

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Bridge Management means the proper voyage plann-14 ing. Not out in the middle of the ocean. Anybody can lay 15 a chart line down, but coming into port to have an 16 adequate crack line, proper crack line for the area you 17 want to go. The times are going to be at places. Time 18 you'll be at the dock, the loading time and back out. 19 That's bridge team management. 20

Now, Bridge Team Training, the team work itself. 21 I have seen so many times when I was piloting a second 22 officer, a third office comes on the bridge to relieve 23 another officer and say 'oh, the pilot has it'. Well, 24 that's fine. They don't have any idea where the vessel 25

171

is, what the next courses are, what buoys you are going to
change course on. The pilot has the responsibility, the
Master the ultimate responsibility. But, every officer on
that bridge should have the knowledge of the course line,
where they are going, where the dangers are and what to do
and that's bridge team management. Bridge Team Training
and Management.

Now, the third officer should have enough knowled-8 ge and training to say to the Captain, "Captain, I think 9 that buoy should be on the starboard side rather than the 10 And not be afraid to do it. When I first heard, port". 11 I sailed Master many years, and I first heard of Bridge 12 Team Training I said, "Captain, you are screwing this up. 13 We are going to knock him on hind end and then I'll worry 14 about the rest of it from there." Well, that really isn't 15 the way it is. We train very on simulators. We have four 16 men on the simulator at a time and they go round and 17 around from Master to navigation officer to watch officer 18 to quarter master. And they learn to work together. And, 19 at the end of the two weeks on the simulators, they have 20 very good team training. 21

We think another point that you should look at is to have two pilots on the bridge at all times in the State of Alaska in congested waters. Now, when I say two pilots, there are two types of pilots as I am sure all of

172
you are aware. A federally licensed pilot and a state 1 licensed pilot. There are certain ships under federal law 2 that do not require a state licensed pilot. Those are 3 ships under enrollment or training domestically. Ships 4 under register or under foreign trade, the states have the 5 right to require pilots aboard. You have an arrangement 6 I understand in the Valdez area, where even the ships 7 under enrollment are required to take that role -- or take 8 state licensed pilots. The pilot that's there now has 9 been extended down the Bligh Reef. It's almost impossible 10 to work below Bligh Reef. With a pilot -- to board a 11 pilot on and off safely. We feel that when the ship is in 12 route either inbound or outbound in any Alaska waters, not 13 necessarily Cook Inlet or Prince William Sound, that a 14 state licensed pilot as a minimum of one and an American 15 Flag ship to have the officer of the watch to be also 16 federally licensed. So, you have two licensed pilots 17 aboard. Particularly in the shorter hauls. If no state 18 licensed pilot aboard and it's an American Flag ship, then 19 two of the officers should be federally licensed. 20

We think there's another position -- and some of these things that I am saying may require some legislative action or some may be done by rule making. Some, I have heard some concern about whether or not it's always safe to enter or depart. Particularly Prince William Sound.

173

You have seasons in Columbia Glacier, and the whole area 1 (indiscernible) you go out and you dodge the iceberg. It 2 may not be the most prudent thing to sail or to come in. 3 I think the State of Alaska should exercise the same authority I have seen around Europe for many, many years. 5 And, that's a harbor master type of program. Wherein the 6 state itself has the authority to close the port. Now, 7 the Captain of the port, the United States Coast Guard has 8 jurisdiction under the ports of waterway and safety acts 9 of regulating the ship movement in waters. But, anything 10 the State of Alaska did that was more stringent than the 11 Coast Guard requirements would certainly be looked on very 12 favorably and it could be done. Whoever, if you did go 13 into a harbor master type program or whoever had the 14 position would have to have authority responsibility to do 15 If he was just a figure head you are wasting your it. 16 time. But, if indeed the channel is closed it may not be 17 prudent to try and go out and dodge icebergs. It may be 18 better to wait till the tide changes when they clear out 19 the way and give you some room. You would have to have 20 equipment. That's something you might want to look into. 21

I have one other thing. Pilots, themselves as we have heard of gentlemen from the fishing industry say the pilot should be involved. The pilots are the main stay of ship movement in congested waters. Your state of Alaska

174

pilots are well trained. All federally licensed and then 1 state licensed afterwards. The pilots themselves say a 2 problem recently. You obtain a license and generally it 3 starts out as a main ship channel license. It doesn't cover the ports themselves. You can take it in the main 5 ship channel, but you can't get out of the main ship 6 To get that in the State of Alaska -- to get channels. 7 that main ship channel limitation lifted, it requires 20 8 dockings and undockings. 9

The law doesn't specify where these dockings and 10 undockings should take place. Theoretically, you can take 11 a small ship and go into Dutch Harbor or someplace and 12 dock and undock 20 times and get your limitation lifted 13 all over the state of Alaska. It doesn't make any sense. 14 The Southeast Alaska pilots presented a program to the 15 Alaska State Pilot Commission last week wherein they said 16 let's change that and make it 3 dockings in every major 17 dock. Docks are different. Everyone of them. Some are 18 peered, some are pilings, some have bendering systems 19 (ph), some don't. The current acts differently. If you 20 have wind, rocks around, they said make it 3 in everyone. 21 There's about 15 major docks, so, in their area, so it 22 would be about 45 dockings rather that the 20 the law 23 The State Attorney General said we can't do requires. 24 that, that's too restrictive. Restricted of what? 25

175

Incompetence? It certainly isn't restrictive on experience. That's what you need. You need good pilots.
 I guess the point I am making here is that those who are
 in charge of regulation should not only understand the
 problems, but understand the possible consequences of not
 enforcing the most stringent requirements feasible.

That's really all I have. I thought I would answer any questions that you might want to ask me.

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MR. PARKER: Well, thank you very much. On the
Bridge Team Training, how much of the industry has
received that kind of training now? What general percentage would you say?

To the best of my knowled-CAPT. ELSENJOHN: 13 ge, Mr. Chairman, very few. We have, since we have 14 implemented the Bridge Team Training concept and courses 15 at the school, we have probably run through 200 officers. 16 There was a symposium in Kings Point up at the Maritime 17 Academy in New York last week that I sent my people to 18 investigate the feasibility of putting it in the various 19 state academies. And, it will be done. We are working 20 now with some of the major oil companies to bring their 21 people into a special one-week training course and it 22 would be ship simulator training, but with heavy emphasis 23 on the Bridge Team Training. So, it's a new concept. 24 Started in Europe, oh, a few years ago and we've traced it 25

176

probably four years ago. 1

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MR. PARKER: How many Maritime Academies on the 2 West Coast? 3

> CAPT. ELSENJOHN: Pardon me, sir.

How many Maritime Academies are MR. PARKER: there on the West Coast?

CAPT. ELSENJOHN: There's one with the exception of our school, all of the other schools, the academy type, are cadet, entry level type. Three year, four year schools. We train only licensed officers who 10 are experienced and who have been at sea and them come 11 back up to upgrade their skills and be trained in new 12 concepts and equipment. 13

MR. PARKER:

Okay. Questions?

MR. SUND: Yeah, Mr. Chairman, I would just 15 like to thank Captain for coming back. I had a chance to 16 meet with him a couple of weeks ago back at his school in 17 Minneapolis and I do have a couple of his flyers here if 18 anybody wants to go to school or see what they have. It's 19 quite impressive. They have a major simulator there that 20 I was impressed with. The full bridge has motion in it, 21 You get in it and you feel the ship move around a too. 22 little bit, but, the point that I think some of us were 23 looking for in terms of prevention and training on the 24 manning of the two issues I wanted to kind of pursue is 25

177

one, the concept I think the Chairman has been talking about. The aircraft industry where you have two pilots in the front of the plane, but they are both equally competent to fly the plane and it's fairly a joint issue and the co-pilot is trained to speak up when he sees something Wherein the maritime industry I think we have qo wrong. had an over abundance of fairly strict -- the Master's in control and by-god that's going to be it type of point of That, in the high tech world that we are in now view. that has to change and the school here has started that. 10

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I am not sure how you mandate all of the industry 11 to get through it. I did meet a little bit with the Coast 12 Guard after I met with the Captain back there and they are 13 starting to talk about relicensing. I think forcing or 14 requiring people to go through some simulator training -15 - I think it's every five years you have to get your 16 license renewed, and they were talking to do it. But, at 17 midterm points... 18

I quess I ask you, Captain, the question is, if 19 the regulatory body thought it was a good idea, how would 20 they go about it and what has to change to get crews back 21 through this system to get any training? I mean, it's 22 voluntary, obviously. 23

CAPT. ELSENJOHN: Really, John, it is to a certain extent. Radar was introduced on merchant ships 25

178

somewhere in the early 50's. And there was no requirement 1 for any radar examination or training up until, oh, my 2 goodness, in the early 60's, and then we had to take an 3 examination when we renewed our license every five years. It was a written examination, general questions, and, 5 collision avoidance and a couple of other things. But, 6 now in order to renew your license and to have the radar 7 endorsement on it you have to go to simulator school. It 8 has to be a simulator operation. It isn't just paperwork 9 anymore. And, if indeed the regulatory body felt that the 10 bridge team concept is valid and they certainly do, then 11 it should be a requirement for license renewal. 12

Now there are several simulators, Kings Point for
example, our school and a couple of other simulators
around that are capable of doing this training. But, it
would have to be regulated within the structure of license
renewals.

Along the line of the Commissioner MR. SUND: 18 Wenk. this morning, brought up the whole licensing 19 structure and the testing that goes on now with the Coast 20 Guard to get the licenses, what's your opinion, I guess -21 - I don't know if we have had the testimony of the people 22 -- or they've kind of hinted at it that the licensing 23 requirements have become a little bit easier in the last 24 few years. 25

179

CAPT. ELSENJOHN: Well, I don't know if 1 that's necessarily so. The only real change that's been 2 made in the last few years with the license examination 3 itself is that it is now multiple choice questions rather The questions are mostly worded so that you than essay. 5 have to read them very carefully, while the possible 6 answer -- the questions aren't ambiguous, but you have to 7 know your material. I always felt that the essay were the R hardest, but I also knew that if I could write a page or Q a page and a half, I might somewhere find the answer that 10 was in there. I don't believe they've become any 11 harder. The licensed renewal course at the school for 12 Masters is nine weeks. Eight weeks of intensive instruc-13 tions and one week in sitting for the license. For chief 14 and second officers it is eight weeks. So, it's really 15 quite intensive and very good. 16

The license renewal is another story. Now, license renewal can be done today by mail. It's an open book examination. Once every five years. Now, I've had license since I was 19 years old, Masters license, my lith license altogether and, of course, I renew them every five years after I got the Masters license in 1954.

I study the radar for about 2 hours. I read the rules of the road. To take the examination takes about 20 minutes. Now, whether or not that should be changed --

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180

there has to be a service, you have to have at least one 1 year sea time on the last three years. I don't know. 2 Questions? 3 MR. WENK: One quick question, Captain? With 4 regard to renewal, is any additional physical examination 5 required? 6 CAPT. ELSENJOHN: Yes. 7 MR. WENK: Is it as intense, strenuous as the 8 one for getting the license initially? 9 It has just become in the CAPT. ELSENJOHN: 10 last two years about the same examination. 11 MR. WENK: About the same? 12 CAPT. ELSENJOHN: Now, the Coast Guard has 13 adopted a new form. I have to have two physicals. One 14 for my state license and one for my federal license. My 15 state pilots license. And, I just went through one back 16 in February that I felt was quite extensive. Made me 17 happy, because everything came up fine. Made my wife 18 happy because she's going to keep me around for a few 19 years, she says. 20 MR. WENK: Thank you. 21 Mr. Chairman? MS. WUNNICKE: With respect to 22 your comment about a harbor master authority. Would such 23 an authority have the right to keep a ship in port even 24 though the conditions dictating that were beyond the 25 181

harbor area? You mentioned ice in the Sound for example.
If there were ice in the shipping lanes, even away from
the port, would that harbor master have the authority to
keep the ship in port?

CAPT. ELSENJOHN: Madam Vice-Chairman. Τ 5 would suggest that that would be a legislative problem 6 that in the creation of the harbor masters position that 7 that area should be covered. I would say that anywhere 8 that that ship prances in Alaska waters between the dock 9 it was actually at till it got to the open seas should 10 certainly be a matter of concern and under the harbor 11 master's authority. 12

MS. WUNNICKE: Thank you.

MR. PARKER: Mike?

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MR. HERZ: You seem to come out of the 15 tradition of Captains, but somehow you have evolved 16 through this -- what sounds like a very contemporary view 17 of the bridge team planning and management approach. Ι 18 wondered what your response would be to some of the 19 discussion we were having this morning about the -- in the 20 traditional view or traditional role of this Captain or 21 Master, he has ultimate responsibility and the discussion 22 had to do with navigation and the possibility of develop-23 ing vessel traffic system that uses satellite that would 24 set up traffic lanes -- predetermined traffic lanes on the 25

182

high seas or coastal and if you deviated from those lanes
you would be requested or required to go back into those
lanes. And, the question is are we in an era where the
absolutely monolithic authority of the skipper can be
questioned. Or whether the Master's voice is always the
correct way to go?

CAPT. ELSENJOHN: Well, in you are the7 situation that as long as the ultimate responsibility is 8 the Master's then the ultimate authority has to be the 9 Master's also. But, this bridge, well, the harbor lanes 10 or the traffic lanes have been an accepted thing, not only 11 in the United States, but I was on the North Europe run 12 for seven years before I went piloting and we have lanes 13 up through the North Sea. Because of that heavy volumes 14 of traffic. Now, if you get out of the lanes in one area 15 for 206 miles, the penalty there was you were in a mine 16 field. Everybody pretty well stayed in the lanes. If you 17 qot of them in other areas no one really bothered you, but 18 it was ideal to stay in them, because a sea lane is like 19 a highway. Everybody stays on the right side of the road. 20 You go up and somebody comes down here. If you get out on 21 the other lane, you're kicking people out of the way and 22 it's dangerous. Everyone stays in it. But, the bridge 23 team concept, when I was on this North Europe run I did 24 all my own piloting to the North Sea except in the 25

183

And, the traffic is very extremely heavy there harbors. 1 and if I caught fog at land's end I had 44 hours on the 2 bridge. I've been asleep standing up looking at the 3 radar. I mean, just -- all of my officers were very good and I always told them that if I say anything or give any 5 orders that don't make sense, correct me right away. 6 Because you do become grumbly. I discharged a pilot in 7 New York harbor one morning -- I was headed for Philadel-R phia, the course was 206 and I was steering 200 -- this is 9 after 30 odd years at sea, and I started that compass and 10 radar trying to decide whether I had to go right or left 11 I was so tired. You need qualified people on a ship who 12 also know and who aren't afraid to say. And, the Masters 13 is now -- because ships are so much bigger than they used 14 to be, they are accepting very well the assistance and the 15 input they get from the other officers. It isn't the old 16 Captain Bligh routine like it used to be or like they 17 mentioned when I was a young Master. You need the help. 18 Ships used to be 10,000 tons and 10 knots. Now, they are 19 200,000, 450,000 tons. Some of them make 30 knots. And, 20 equipment on them is very sophisticated. One man cannot 21 do it all. 22

MR. HERZ: What about relinquishing control
to an outside authority who is dictating from his satellite view of where you are?

184

Well, that's not a new CAPT. ELSENJOHN: 1 concept. My company's first new ship was built in 1957 2 and I was the Master on it. It was one of the largest 3 ships in the world, at the time. Right now, it would make a light boat on some of these things. But, I came 5 into Rotterdam, dense, dense fog and there were 40 ships 6 at anchor and I nosed around and pushed my snout up 7 against the pilot boat till I got the pilot aboard and he R said, "well, I have to go to anchor, Captain", and I said, 9 "Damn". He said we do have a new system we just put in 10 and it's radar control. Controlled by pilots and I think 11 that is one of the important things in that type of an 12 And he said we can make a few round turns operation. 13 until they pick us up and identify us and then they'll 14 start us in. We had 28 miles up the Maze River to go and 15 he said they will give us every order, speed and helm 16 order and we must obey them. If we don't our only 17 alternative is to go to anchor. So, we tried it. They 18 say we're 13 meters off buoy so and so, now come right 5 19 degrees. But it was a working pilot operating the system. 20 We went into the dock, discharged, came out the next day, 21 the ships had anchored. So, it's not a new concept. But 22 if you have shoreside control with the authority --23 mandatory authority, then you have to have qualified 24 people running it. 25

185

I don't say this derogatorily about the Coast 1 Guard's vessel traffic system. It's a good system, it has 2 worked well where it has been, but they've been more or 3 less advisory and have the yeomen on their and they are 4 good kids. But, they don't have the experience. And, if 5 you have the type of system there it should be working 6 pilots or retired pilots of the area that have the 7 equipment, have the radars where they can see every thing 8 that is going on. Then you can give them the mandatory 9 control. 10

But, also, when you do that you have to accept financial responsibility, too. Because you give the bad order, the ship goes aground, and there's damage, let alone the environmental damage potential, somebody has to take the financial responsibility.

MR. PARKER: Anyone else? John?

MR. SUND: Well, I just wanted to follow up
a little bit on the manning issues, Captain, that you
brought up on the manning level. You direct the man in
restricted waters and I'm assuming inside of entrances of
restricted waters?

CAPT. ELSENJOHN: Yes.

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23 MR. SUND: How do you feel what you laid out
24 is different than what is being done today?

CAPT. ELSENJOHN: Because the competitive

186

pressure is over the last few years, we reduced on most 1 ships one mate. One deck officer. So, right now there's 2 Well, the Master always and the Master generally. 3 generally a chief officer, second officer and a third Ä officer. In addition to the various duties that they have 5 there are also watch standers. The chief officer in 6 addition to standing normally the 4 to 8 watch, is in 7 charge of cargo and maintenance on the ship. 8

9 The second officer, the 12 to 4 watch, is also in
10 charge of the navigation of the ship. Correction of
11 charts, laying the charts out, between he and the Master
12 somebody puts the courses down, etc.

The third officer in addition to standing the 8 13 to 12 watch is in charge of the safety, lifeboats, flairs, 14 signals, everything that has to go on there. So, they all 15 have additional duties besides standing their watch. Now, 16 if you have the chief officer who is in charge of cargo 17 standing the four day watch and the ship arrives at 10 at 18 the dock and starts to load, he's stood the four days 19 watch, he's in there, he's on deck loading the cargo. He 20 may work through his watch that afternoon and on into the 21 next morning, finish the cargo and then he goes back on 22 watch at 4 o'clock again. Now, the law says that he has 23 to have six hours rest in the last 12 hours before he can 24 take a watch role. Believe me, that is never seldom, if 25

187

Your officers when there are three of ever adhered to. 1 them work around, help each other. I said I wasn't going 2 to get into the Exxon Valdez thing and I don't intend to, 3 but I think you'll find out that the one officer who should have been on watch, they let him rest because he 5 was tired. The man who was on watch wasn't the man who 6 should have been there to begin with. But, that's one of 7 those things. 8

So, if you have a cargo officer whose sole job it 9 is to take care of the loading and discharging of the 10 cargo, and I'm thinking particularly of tankers now, 11 because that's where the bulk of the problems are. It's 12 a problem on all the ships. But, he's always fresh, 13 alert, you don't grind your other officers into the ground 14 trying to handle the cargo. 15

The most dangerous part of any tanker operation is the loading operation. Discharging you can have a spill or cargo contamination, but the loading is the most dangerous. So, everybody is the most alert there. You get several people out helping you. Pump man on deck. Your AB's if you have them.

On some of the freighters a couple of our companies with Master, Mates and Pilots now have gone back and put the fourth mate on the ship. They took them off, oh, six, eight, ten years ago because of competitive

188

pressure and they have put them back on now. Because it's
 working everybody too hard and the overtime -- you can pay
 for an extra man with the overtime.

MR. SUND: I want to get into my favorite issue here, Mr. Chairman. Captain, this is the great 5 double hull, single hull issue -- it kind of keeps coming 6 up every meeting, probably because I bring it up, but do 7 you have an opinion? And, the way it's come out so far, 8 today anyway, is safety, ballast issues, groundings, 9 recovery of the ship is one issue. And the other issue is 10 safety to cargo or containment of the cargo. 11

CAPT. ELSENJOHN: Well. that double hull 12 situation is something that is kicked around for a lot of 13 years and it has been rejected in many instances because 14 of the cost factor and the lack of any strong indication 15 that it will accomplish too much. If you go to a 15' 16 double hull and you hit a rock that sticks up 20' you are 17 five feet into the other hull anyway. Because you start 18 moving 200,000 tons mass into a rock it is not going to 19 slow down. It's steel, it will cut right through it. 20

It's good in the areas if you're loading, you settle the ship on the bottom or if the outer hull fractures, it's still contained. I don't presume to even know enough about the subject to get into the cost effectiveness of. I don't know what it would cost to

189

double hull those ships. I did hear a comment earlier 1 that the freighters that run around are double hulled. 2 They are, but they are carrying oil in the space between 3 the hull. That's where they carry their bunkers. Most of them. 5 So, I didn't give you much of an answer on that, 6 John, I know, but I am really not knowledgeable in the 7 area to speak as an expert on it. 8 MR. SUND: Thank you. 9 MR. HAVELOCK: Sir, do you have any observations 10 regarding how low a bridge team should be assigned sea 11 duty without a break? 12 CAPT. ELSENJOHN: Do you mean the team 13 itself or the watch officer on watch? 14 MR. HAVELOCK; The team. 15 CAPT. ELSENJOHN: No, I don't. But I would 16 -- I see no problem with them. Four hours, six hours. 17 Because the team consist of the watch officer on watch, 18 the Master, quarter Master, a look out, I would guess four 19 That's good nominal number. hours. 20 MR. HAVELOCK: You keep the team running for a 21 matter of months? Is that.... 22 CAPT. ELSENJOHN: Oh, no. Oh, I see. Ι 23 misunderstood your question. The team itself, per se, 24 only operates in restricted waters. It's always a team 25 190

out in the middle of the ocean, but they work four hours 1 on and eight hours off. And, when you are coming into 2 congested waters or, for example, Prince William Sound, 3 you have Hitchenbrook on up to Valdez. And, the Master the watch officer, the quarter Master and the lookout. 5 That's a specialized area. The normal routine watch is at 6 sea if there are the watch officer and two other persons 7 on watch they act as a team then, too. But, it can go on A for months. 9

MR. HAVELOCK: Is there any difference in the risk in loading and unloading tankers and unloading and loading, say, container ships?

CAPT. ELSENJOHN: Oh, very much so. 13 Container ships, well, it all depends on what's in the 14 container, I guess. But, it's a limited amount in any 15 event. A 40 foot container with acid products, there is 16 a hazardous problem, there, but it's not the spill or the 17 contamination problem. And that's generally done, of 18 course, some container ships are self-containment, but, 19 generally it's done with a shark -- your danger is wire 20 breaking or pad pulling. But, on tanker when you are 21 loading at the rate of 20,000 barrels an hour or higher 22 and a hose goes, an awful lot of oil can be in the water 23 before anybody can get that hose shut down. Or if 24 somebody doesn't close the value on #9 center tank, you 25

191

can blow a lot of oil out of there. So, there's more
danger in the tankers than anything else. From the
contamination standpoint.

MR. HAVELOCK: We heard it said that pressure 4 generated by the owners need to move oil quickly. That it 5 is to meet refinery schedules or to meet tank farm 6 limitation -- in Valdez have created pressure to cut 7 Would there be anything in your maritime corners. 8 experience that would support that? Or is that just a 9 mythology? 10

CAPT. ELSENJOHN: No. That's, of course, 11 the whole world is a competitive place today. I sometimes 12 question some of our steamship companies when they discuss 13 competition because they are really competing with 14 themselves. It's an internal competition. Particularly 15 with some of the oil companies. It's carrying their own 16 cargos to their own refineries. They have very little 17 outside pressure, but it's still competition. I don't say 18 they cut corners. I don't think that's a fair term. Thev 19 try to expedite the ships as quickly as possible. Time is 20 money on ships, particularly -- the ships used to be worth 21 \$100 an hour and some of them are worth \$6,000.00 an hour. 22 If you could save an hour maybe the difference between 23 profit on that leg of voyage and loss. 24

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If you ammoritize the ship out it goes up to a lot

192

more money than that. So, I don't think there's any 1 company who would say to their master, "we recognize this 2 as unsafe situation, but move the ship anyway". Generally 3 that decision is left to the Master and over years of . operating experience, companies know how long it should 5 take to process a voyage. Regardless of where it is, too. 6 And, if you get a Master who does it in 30% more of the 7 time you won't be around very long. It's a competitive 8 thing. And, it does, I'm sure on an individual ship basis 9 occasionally, safety sacrificed in certain areas. But, I 10 don't think it's a company policy to sacrifice the safety. 11

MR. HAVELOCK: Have there been any changes in the bureaucracies of oil transportation by sea in the last decade or two from the Master on up? That is, is there changes in the command structure, is there greater frequency of management intervention and management affairs?

CAPT. ELSENJOHN: I think there has and part of 18 it's due to the size and value of the ship and part of 19 it's due to the modern communications that we have. It 20 used to be when the ship left the docks, they didn't have 21 to put up with that company for the next two months or 22 whatever it is. But, now they can get me on a telephone 23 in two minutes. So, the companies do have a little more 24 management control than they had ten years ago 25 and

193

particularly more than they had twenty years ago.

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And, plus, too the ships are worth so much more 2 money now. It requires -- we used to be able to build a 3 ship for 3.5 million dollars. Now it's not uncommon to 4 have 80 or 85 million dollars in a ship. And, upwards to 5 280 million dollars in a ship. Depending on the type of 6 We just converted a ship, a passenger ship thing. 7 granted, but we have 40 million dollars in the conversion. 8 That would have bought 10 ships twenty years ago. So, in 9 order to stay in the business, the companies have to keep 10 more control than they used to have. 11

MR. HAVELOCK: Is there any change in the quality of that commanding control direction? Are there more accountants up there telling you what to do? Or, is that not an issue? A mythology?

16 CAPT. ELSENJOHN: No, I think that may be an 17 issue. I can't speak to it from an authoritive stand-18 point, but the numbers are getting more involved in these 19 today.

20 MR. HAVELOCK: Well, let me ask you about manning 21 standards. Are you familiar with how the Coast Guard goes 22 about setting the manning requirements?

CAPT. ELSENJOHN: Yes, I am.

24 MR. HAVELOCK: Maybe you could tell the Commission how that happened?

194

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CAPT. ELSENJOHN: Well, all of your older 1 ships, of course, have the many standards that have been 2 set for a long time. But, let's take for example a ship 3 that's been running for some time. The company does a study and they come up with a number of jobs that have to 5 be done on a routine basis. They add up the number of men 6 it takes to do it and the number of hours. Then they'll 7 take some emergency situations. Put the men in the number 8 of hours. They'll add that all up in the bottom, figure 9 a man can work "x" number of hours and it divides out to 10 where we require two ordinary seaman, one QMED, so and so 11 and so. 12

It's a number thing. Then the company itself 13 takes their numbers to the Coast Guard and presents them 14 to the OSMI and the port that the ship is running out of 15 and if they can convince him that they can get by with a 16 number of men that their study show, then they will reduce 17 the men in requirements. If they can't convince the OCMI 18 then they don't get a reduction. On a new ship they do 19 basically the same way. It's a numbers thing. 20

MR. HAVELOCK: Does the Coast Guard ever actually
come out and examine the vessel and talk to the crew or
to the potential Masters in determining.....

24CAPT. ELSENJOHN:Not to my knowledge. I25couldn't say they don't, but not to my knowledge they

195

don't. 1 MR. HAVELOCK: Does anybody participate in the 2 establishment of those levels other than the company and 3 the Coast Guard? CAPT. ELSENJOHN: No. 5 I guess that's my questions, thank MR. HAVELOCK: 6 you. 7 Fatigue is of a great interest to MR. PARKER: 8 us and I look forward to reading your report. But, it 9 will come out after our report, so as we get into it we'll 10 probably be talking to you and any others you can recom-11 mend in the field in this particular subject. It seems 12 like it's been around a long time and you know, when they 13 first brought up the boredom problem on the very large 14 ships, especially on the Gulf to the West Coast to Western 15 Europe and East Coast runs and so forth. And, I -- you 16 think the understanding of the problem is greater now than 17 it was ten years ago, let's say? 18 CAPT. ELSENJOHN: Yes, it certainly is. 19 And, that boredom -- ship design is starting to be looked 20 at in that problem. It's possible now to go on a ship and 21 never see anybody except the man you relieve. Crews all 22 have their own individual rooms. There used to be at 23 least three in a room and sometimes upward to 15 or 20 in 24 one big room. So, you had some social contact. They 25

196

discovered it's very important now. So, they are starting 1 to build a central area, social type of a program and the 2 rooms around us -- so that it opens onto a foyer type of 3 a thing and the T.V. and radio and small beer bar and so they do have to socialize. 5

I was on the study for the Formaread (ph) and we went to Japan four years ago to study that same problem and it's a very definite problem. And, it affects the operation and it affects the work of the people on the ships. Man is a social animal and we are just beginning 10 to learn it. 11

## MR. PARKER: Okay. John?

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MR. HAVELOCK: Could I ask one follow up to a 13 question I already asked? As you described the phases 14 through on which manning requirements are set and since 15 the companies have the opportunity to independently 16 determine above that standard what accruing should be --17 that is most of our testimony here has been that actual 18 crews are well above the Coast Guard standard or above by 19 Would it be fair to say then that when the a few men. 20 owners go in they are shooting to get the minimum possible 21 requirement that they might have in terms of the Coast 22 Guard minimum so that they would have freedom to move 23 above that with the amount in determining the crewing 24 requirements of the vessel. 25

197

CAPT. ELSENJOHN: Yes, that's a safe statement MR. HAVELOCK: Thank you.

One of the things, if I CAPT. ELSENJOHN: 3 can just qualify that just a little bit. Let me think how I want to say this. Most ships run above the numbers that 5 are required on the certificate of inspection. Simply 6 because it takes that many people to do the job. The 7 things that are problem areas that we see, if everything 8 runs very smoothly you can get by with the minimum that 9 the inspection requires. But, there are a lot of other 10 How many men does it take to fight a fire? factors. Ι 11 realize you can't operate on the basis that we have to 12 cover every emergency to the maximum. You might fight a 13 What if you have two fires? fire with seven people. 14 Fourteen? Three fires? Twenty-one? You just keep going, 15 You have that emergency that has to be looked at so. 16 secondarily to launch a lightboat, not only for your own 17 sake but to rescue others from another ship. There are 18 all types of lifeboat designs now where they launch one 19 They off the shoot, they throw everybody in and 20 time. strap them down like airplane seatbelts and you drop this 21 thing fifty feet and it hits the water and an injured man 22 is in there and if he isn't dead before he hits the water 23 he will be afterwards. 24

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But, this is fine if you are abandoning your ship.

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But, you go now you have somebody else. You go to rescue 1 them. How do you recover this boat? You can't. It's not 2 recoverable. So, now you've got a ship sinking over here. You are taking the crew off in your life. Well, now you've got your lifeboat out there. You can't get it back. The manning is a serious issue and it really has to be looked at.

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The unfortunate thing is that to build a ship R today, the price is fixed throughout the world. Doesn't 9 matter what flag it is or what type of crews you put on 10 it. To buy insurance on that ship, the price is fixed. 11 To buy bunkers for it the price is fixed. The only 12 variable that can be attacked is crew wages. Numbers of 13 the crew. Now, technology is such that we could probably 14 run a ship across the ocean with nobody on it. And 15 probably put everything there and let it go. Technology 16 has no loyalty. If we can do it as a United States Flag 17 Ship and operate with six men, Singapore ship can operate 18 with six men. We pay our people \$50.00 or \$100.00 or 19 \$200.00 a day, whatever the number is, they can pay them 20 \$5.00 a day and one fish head. 21

So, you really -- the reduction of manning isn't 22 the ultimate answer to this. The quality of transport 23 were the only "maritime" nation. And I put that in quotes 24 because we most certainly are not a maritime nation. We 25

199

say we are, but it's just in word in only. We are the 1 only one that has no cargo protection other than military 2 cargo, which the law says 100% of military cargos being 3 American bottom(?) we don't do it. It says 50% of foreign aid cargo's being American bottom (?)-- we don't 5 There's no incentive for an American do it. Period. ĸ company to build ships, quality ships and put them under 7 the American flag unless they are engaged in the domestic 8 freight. 9

The Norwegians have just discovered that they 10 can't do it -- they are down to six men on their ships. 11 Running big ships with six men. And, they've just ask now 12 to be able to flag them out, because they can't compete 13 even at six. Because the foreign flag nations are running 14 the six men, too. I don't want to get into my speech of 15 we should have an American Merchant Marine, because it 16 would take me hours. 17

I thank you very much for having me up here. If you need any assistance or whatever, I love your country and I would be pleased to come back. I used to live up here when I was kid. So....

22 MR. SUND: On the minimum manning, Mr. 23 Chairman, I just want to clarify one issue I think that 24 came up here. They do set minimum manning, but the Coast 25 Guard does not take consideration for maintenance or

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stewards. And, so when we get in the Exxon Valdez, and I 1 think I made the comment earlier, they had a minimum 2 manning requirement of fourteen or fifteen and had twenty 3 people on board. I think I've tried to work through the 4 I think they only had -- they met the minimum numbers. 5 manning with the people they had to have. In other words, 6 the officers and the engine room people, the extra five or 7 six that show up aren't required on the certificate of 8 manning anyway. So, they were real close to the minimum 9 manning requirement on their certificate of manning. And 10 the extra bodies were, I think, a couple of stewards and 11 a cook and I think they might have had an extra AB or 12 something like that. But, so, it just gets to be --- it 13 isn't that they were over on what they were required to 14 They were real close to it. have. 15 Thank you very much for coming. 16 MR. PARKER: Thank you very much. 17 MR. SUND: I do have two brochures from his 18 school here if anybody wants to look at it. 19 We will take a five minute stretch MR. PARKER: 20 and then we will resume with Mano Frey. 21 (Off the record) 22 (On the record) 23 MR. PARKER: Come back to the table, please, 24 otherwise we will be late and everybody will blame me. 25 201