Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River



Commission d'enquête sur le déclin des populations de saumon rouge du fleuve Fraser

**Public Hearings** 

**Audience publique** 

Commissioner

L'Honorable juge / The Honourable Justice Bruce Cohen

Commissaire

Held at: Tenue à :

Room 801 Federal Courthouse 701 West Georgia Street Vancouver, B.C.

Tuesday, August 30, 2011

Salle 801 Cour fédérale 701, rue West Georgia Vancouver (C.-B.)

le mardi 30 août 2011

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PANEL NO. 58
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1
                                Vancouver, B.C. /Vancouver
 2
                                 (C.-B.)
 3
                                August 30, 2011/le 30 août
 4
                                2011
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       THE REGISTRAR: The hearing is now resumed.
 7
       THE COMMISSIONER:
                         Good morning.
 8
       MR. MARTLAND: Mr. Commissioner, we're today starting
 9
            the first of three regulatory panels. Each panel
10
            will be one day in length. They'll be very dense,
11
            I expect. We're trying to obviously cover that
12
            ground within the one day. The time allocations
13
            are not very long as a result of that.
14
                 One of the points I'll just make before we
15
            commence today's evidence is to offer, in
16
            responding to what Ms. Gaertner identified as a
17
            concern yesterday, certainly our view, that unless
18
            it presents a difficulty for a participant or a
19
            witness, if -- we have both Mr. Swerdfager today
20
            and Mr. Thomson both here on this panel but
21
            returning on other regulatory panels in the next
22
            few days. So if there is a question that could
23
            not be asked today because of time constraints,
24
            that came later in the week on another topic, we
25
            would not expect that to create a difficulty and
26
            that perhaps may help to address some of the time
27
            pressures.
28
                 I'll ask by beginning, Mr. Giles, to have
29
            this panel affirmed, please.
30
       THE REGISTRAR: Gentlemen, would you turn your
31
            microphones on, please?
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33
                           IAN FLEMING, affirmed.
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35
                           GAVIN LAST, affirmed.
36
37
                           TREVOR SWERDFAGER, affirmed.
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39
                           ANDREW THOMSON, affirmed.
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41
       THE REGISTRAR: Would you state your name, please?
42
       MR. SWERDFAGER: Trevor Swerdfager.
43
       MR. THOMSON: Andrew Thomson.
44
       MR. LAST:
                 Gavin Last.
45
       DR. FLEMING: Ian Fleming.
46
       THE REGISTRAR: Thank you. Counsel?
47
       MR. MARTLAND: Thank you. I'll begin with some
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preliminary matters, and Mr. Lunn, if you could put on screen number 1 from Commission counsel's list of documents, please.

EXAMINATION IN CHIEF BY MR. MARTLAND:

#### MR. MARTLAND:

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- Q Mr. Swerdfager, sir, I'll start with you. You recognize that as being your c.v.? It may not be the very most recent one, given the description of your title, but a fairly recent one?
- MR. SWERDFAGER: It is, yes.
- MR. MARTLAND: I'll ask this be marked as the next exhibit, please.

THE REGISTRAR: Exhibit 1578.

EXHIBIT 1578: Curriculum vitae of Trevor Swerdfager

#### MR. MARTLAND:

- And briefly, to cover your background, you have a Bachelor of Environmental Studies from the University of Waterloo from 1985, a Master's of Arts in Geography and Resource Management from the University of Ottawa in 1988, and from 1988 for about 18 years you worked with Environment Canada largely with the Canadian Wildlife Service, starting out in roles related to co-management agreements with First Nations for waterfowl and migratory birds, and later taking on management roles including two years as the manager of biodiversity program development, four years as chief of the Resource Conservation Division of the Canadian Wildlife Services, Prairie and Northern Region, two years as Regional Director for Environment Canada's Environmental Conservation Branch in the Pacific and Yukon Region, and four years as the National Director General of the Canadian Wildlife Service. Is that accurate?
- MR. SWERDFAGER: That's accurate, yes.
- In 2006, you worked as a senior advisor on sustainability for the Forest Products Association of Canada as part of the Federal Executive Interchange Program, and then in 2007, you returned to the federal government in the position of Director General of what we'll refer to in the coming days as the AMD, the Aquaculture Management

Directorate within the DFO? 1 MR. SWERDFAGER: That's correct. 3 In that position, you were responsible for 4 providing strategic and tactical leadership for 5 AMD, developing and implementing federal 6 aquaculture regulations, managing human and 7 financial resources, working with other agencies, 8 industry and stakeholders, and providing strategic 9 and scientific advice to the departmental 10 executive, Deputy Minister and the Minister; is 11 that right? It is, yes. 12 MR. SWERDFAGER: 13 And in March, 2011, you moved over to the position 14 of being the National Director General for C&P, 15 the Conservation and Protection Directorate? MR. SWERDFAGER: That's correct, yes. 16 17 MR. MARTLAND: Mr. Lunn, I'll move now to Mr. Thomson. 18 I apologize to all of you for these witnesses 19 (sic), but it's an efficient way to cover your 20 background -- for these long questions, rather. 21 It does allow me to cover the background. 22 Number 2 on our list of documents, Mr. Lunn. 23 Mr. Thomson, I'll turn to you next. You'll 24 recognize that as being your c.v.? 25 MR. THOMSON: Yes, I do. 26 MR. MARTLAND: I'll ask this please be marked as the 27 next exhibit. 28 THE REGISTRAR: Exhibit 1579. 29 30 EXHIBIT 1579: Curriculum vitae of Andrew 31 Thomson 32 33 MR. MARTLAND: 34 Sir, you graduated in 1991 with a B.Sc. in Marine 35 Biology from the University of British Columbia, 36 and in the 1990s, you worked as a contract 37 biologist and technician for DFO and other 38 agencies and organizations in relation to a 39 variety of fishing-related projects which included 40 fisheries surveys, sampling, data analysis, data-41 based development and GIS development? 42 MR. THOMSON: Yes. 43 You spent periods in 1998 and in 2001 to 2002 44 coordinating DFO's Pacific Biological Station's 45 open house and in the period of '91 to 2003, you 46 served as the program head for the Atlantic Salmon 47 Watch Program which was a joint federal/provincial

program to determine the distribution, abundance and biology of Atlantic salmon in B.C. waters; is that right?

MR. THOMSON: Yes, it is.

- Q In 2003, you became the Acting Senior Aquaculture Officer in DFO's Habitat Enhancement Branch, and among other things, you led policy work on aquaculture and served as a primary industry liaison. In 2005, you became Director of the AMD, a role that you hold to the present day.
- MR. THOMSON: A clarification: I became Acting Director in 2005, and was affirmed as Director in 2008.
- Q Thank you. In that role, you've served as the lead departmental official for the Pacific Region for aquaculture-related issues, including regulatory issues, policy and operational guidelines development, litigation management and media requests.

MR. THOMSON: Yes.

- MR. MARTLAND: And if I might, Mr. Lunn, I'm going to move through 18 through 22 on our list of proposed exhibits. Mr. Swerdfager and Mr. Thomson, I welcome either one of you to help me in this task. I don't propose to ask a great many questions.
- Q These are a series of organizational charts. We have to read fairly carefully. Number 18 on our list of documents in the upper right-hand side says [as read]:

A draft Pacific aquaculture regulatory program, organizational chart.

Does either of you recognize that and can you comment on its accuracy?

- MR. THOMSON: I recognize it. It's a reasonably accurate chart although there has been some minor changes as to reporting structure since it was drafted.
- MR. MARTLAND: I'll ask this please be marked as the next exhibit.
- MR. TAYLOR: I can advise, if it helps, there's another one not quite the same at Tab 4 of Canada's documents. The significance of that is that to understand this, you need to have the colour, which yours is black and white.
- MR. MARTLAND: No, I'm happy to have Mr. Taylor make it

1 more colourful this morning, that's fine. MR. TAYLOR: I just raise it and let Mr. Martland know 3 that. 4 MR. MARTLAND: No, it's helpful, that's helpful. I 5 wonder if I can in fact go to that and follow Mr. 6 Taylor's lead. This is the colourful one. 7 I take it this, again, gives us a better sense of 8 the structure; is that right? 9 MR. THOMSON: This is a much newer version, much more 10 accurate, yes. 11 MR. MARTLAND: Okay. Having marked the first number 18 12 from our list -- I take it, Mr. Registrar, number 13 18 from our list was made an exhibit? 14 THE REGISRAR: Not yet. I was waiting for Mr. Taylor 15 to finish his comments. 16 MR. MARTLAND: No, that's fine. I wonder if I can, to 17 be thorough, have number 18 from our list marked 18 as the first exhibit --THE REGISTRAR: That will be Exhibit 1580. 19 20 MR. MARTLAND: -- and next, I'll use the colourful Canadian document that's put on screen, number 4 21 22 from Canada's list, as the next exhibit, please. 2.3 THE REGISTRAR: That will be 1581. 24 25 EXHIBIT 1580: Commission document 18, black 26 and white organizational chart 27 28 EXHIBIT 1581: CAN document Tab 4, coloured 29 organizational chart 30 31 MR. MARTLAND: If I can move to number 19 from our list 32 of documents, the date on this is June of 2011. 33 It refers to programs. 34 Again, Mr. Swerdfager or Mr. Thomson, can you 35 comment on that document when you see it? 36 MR. MARTLAND: And, I'm sorry, it's number 19 from our 37 list of documents, Mr. Lunn. Does that document fairly accurately set out the 38 39 structure vis-à-vis your programs? 40 MR. SWERDFAGER: The two out of the -- the boxes on the left and the right are accurate. The one in the 41 42 middle with respect to aquaculture management is 43 missing two boxes below it. 44 Okay. 45 MR. SWERDFAGER: Director of Stewardship's there and 46 Ford is correct. Director, Aquaculture Policy,

Eric Gilbert is correct. Missing from the diagram

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is something called the National Aquaculture 1 Secretariat, and also missing from the diagram is 3 a fourth director who is Jamie Smith, who is 4 responsible for sustainability reporting and 5 certification. 6 That's helpful. If I might ask this be MR. MARTLAND: 7 marked as the next exhibit, please. 8 THE REGISTRAR: Exhibit 1582. 9 10 EXHIBIT 1582: Commission document number 19, 11 organizational chart 12 13 MR. MARTLAND: Number 20 in our list is a program 14 policy for the AMD org chart. It has an updated 15 date of June 29, 2011. 16 Same question, please? 17 MR. SWERDFAGER: So that's an accurate one, then. 18 You'll see the ones that I said were missing are 19 on this one. 20 Oh, that's helpful. 21 MR. SWERDFAGER: This one is correct. 22 MR. MARTLAND: All right. We seem to be getting things 23 on the second go. 24 I'll ask this be marked as the next exhibit, 25 please. 26 THE REGISTRAR: Exhibit 1583. 27 28 EXHIBIT 1583: Program Policy - AMD 29 organizational chart 30 31 MR. MARTLAND: Next, number 21 on our list of 32 documents, also bearing a June 2011 date, "The 33 Ecosystem and Fisheries Management" is the title 34 of this org chart. 35 Mr. Swerdfager, can you comment on that? 36 MR. SWERDFAGER: Again, the majority of the boxes are correct. The Executive Director, Aquaculture 37 38 Operations I note in the middle is correct, and I 39 think that -- I'm not as familiar perhaps, as I 40 should be, with the sub boxes in some of the areas 41 I don't work in directly, but this looks very 42 accurate. 43 MR. MARTLAND: Okay, that's helpful. I'll ask that be Exhibit 1584, please. 44 45 THE REGISTRAR: So marked. 46

EXHIBIT 1584: Ecosystems and fisheries

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1 management organizational chart 3 MR. MARTLAND: Next, I'll go to number 22 on our list of documents. This one seems to be in a draft 5 format. It's called "Aquaculture Operations 6 Proposed Organizational Chart". It doesn't have 7 -- the date on the bottom left is June 3, 2011. 8 There doesn't seem to be one that's finalized. 9 Can you comment on that, please? 10 MR. THOMSON: It's accurate and was provided at the 11 onset of the Aquaculture Operations Directorate 12 being set up, so it's accurate as far as I see. 13 MR. MARTLAND: I'll ask this be 1585, please. 14 THE REGISRAR: So marked. 15 16 EXHIBIT 1585: Draft aquaculture operations 17 proposed organizational chart 18 19 MR. MARTLAND: 20 Mr. Last, I'll turn to you, please, sir. 21 MR. MARTLAND: If we could have number 4, Mr. Lunn, on 22 our list of documents, which is a question about 23 the c.v. You'll see that momentarily. 24 Sir, that's your c.v.? 25 MR. LAST: Yes, it is. 26 MR. MARTLAND: If this could be Exhibit 1586, please? 27 THE REGISTRAR: So marked. 2.8 29 EXHIBIT 1586: Curriculum vitae of Gavin Last 30 31 MR. MARTLAND: 32 You hold an Aquaculture Technician Certificate 33 from Capilano College from 1989, a B.A. Honours in 34 English from the University of Regina from 1993, 35 and an LLB from the University of Saskatchewan Law 36 School from 1999, and I take it you began your 37 career with the province in 2000, working as a legislative analyst for the Ministry of 38 39 Agriculture, Food and Fisheries, and in 2003, you 40 became the Manager of Finfish Aquaculture 41 Development with what's been referred to as BCMAL, 42 the Ministry of Agriculture and Lands; is that 43 right? 44 MR. LAST: Yes. 45 In that role, you developed and implemented 46 finfish aquaculture policy and programs, prepared 47 briefing materials for senior officials and

liaised with the public, other levels of government, industry and interest groups, and in 2006,I understand that you moved into the role of Assistant Director of MAL's Aquaculture Branch, and in that capacity, were responsible for program administration, issue management and developing and managing strategic relationships with the goal of revitalizing federal/provincial relationships. Is that right?

MR. LAST: Yes.

- Q In 2010, anticipating the move to federal regulation of aquaculture, your position was moved to the Assistant Director of the Policy and Industry Competitiveness Branch within the Ministry of Agriculture.
- MR. LAST: Yes, that's correct.
- And your current role is similar to your previous position with a reduced aquaculture responsibility and, on the other hand, increased responsibilities for a broader number or scope of agricultural issues?
- MR. LAST: Yes.
- MR. MARTLAND: Thank you. Dr. Fleming, next I'll ask, please, that number 3 from our list of documents be placed on the screen. While that's brought up, I'll begin this long-winded narration of your background.
- Q I'll just confirm, first, Dr. Fleming, that's your c.v.?
- DR. FLEMING: That's correct.
- MR. MARTLAND: I'll ask this please become Exhibit 1587, please.

THE REGISTRAR: So marked.

EXHIBIT 1587: Curriculum vitae of Dr. Ian Fleming

#### MR. MARTLAND:

Or. Fleming, you hold a Ph.D. in Ecology from the University of Toronto from 1991, having worked on hatchery and wild coho salmon in B.C. during your thesis work. From 1991 to 2001, you were a research scientist for the Norwegian Institute for Nature Research which is a National Institute for Applied Ecological Research, and in that capacity, the main focus of your research was farmed and wild salmon interactions; is that right?

1 DR. FLEMING: That's correct. In 2001, you joined Oregon State University as an 3 associate professor in marine fisheries ecology, and in 2004, you moved to where you are now 5 situated in Memorial University in Newfoundland 6 serving as the Director of the Ocean Sciences 7 Centre until 2009, currently as professor in 8 marine and freshwater ecology; is that right? 9 DR. FLEMING: That's correct. 10 Since leaving Norway in 2001, you've maintained 11 scientific affiliation with the body I just 12 described that you'd worked for, holding an 13 adjunct status there and undertaking collaborative 14 research. Indeed, I understand within the last 15 month you spent some time in Norway? 16 DR. FLEMING: That's correct. 17 Your research and academic publications have 18 involved work on Atlantic and Pacific salmon 19 species, both wild and farmed, including various 20 studies on fish behaviour, reproductive successes, 21 life history, genetics and population biology and 22 you've worked extensively on the management and 23 conservation of wild fish populations and 24 ecological interactions with marine finfish 25 aquaculture; is that right?

DR. FLEMING: That's correct.

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You hold presently a number of grants from Canadian and European funding agencies, among other things, to conduct work related to interactions between farmed and wild fish, on escape prevention and on the effect of captive rearing; is that right?

DR. FLEMING: That's correct.

I'd like to, having taken a bit of time to cover that as an introduction, really ask a fairly broad question which is the following: Can the Department of Fisheries do two different things at the same time, the two different things being, on the one hand, promoting the industry, promoting the aquaculture industry, and on the other hand, regulating that industry and protecting wild stocks and fish habitat?

Mr. Swerdfager, perhaps I can start with you, please.

MR. SWERDFAGER: The question you posed is one that I get asked a lot, and my short answer to it is yes. My longer answer is really in two parts, I guess I

 would say. The first is on a sort of more theoretical or conceptual level, and the second is much more personal.

At the general or sort of more conceptual level, I think historically there's been a view that in the paradigm particularly that arose in the '60s and '70s of having the environment and the economy-type departments clash, essentially, and you load up both departments and sort of smash them together in a battle between economy and environment and see who kind of comes out ahead. That particular paradigm has been around obviously since that period, and it's certainly one that some people feel today holds some allure and some attraction, that dichotomy between environment and economy.

At the same time, I think there's been a growth in the sense of the paradigm around sustainability or sustainable development, and under that approach, I think that what we're looking at much more is trying to take very much a focus on environment, economy and social issues at the same time.

I'm quite aware that when I say that, there's often an internal or sometimes even an external overt rolling of the eyes. It sounds perhaps like a platitude to say that we're focused on sustainability, but I actually believe that it's true. I think that in order to make progress as a society, we need to be able to move on all three fronts at once. We need to be able to be actively engaged in protecting the environment, developing our economy and working at the social scale.

In my opinion, DFO is uniquely well placed to do that. I think that because of our science presence, we are uniquely well placed to understand the environment because we work closely with industry, with stakeholders, with communities, both here in British Columbia, but more generally, nationally and indeed internationally. I think we're uniquely well placed to understand the dynamics of industry, whether it's in this case aquaculture or more broadly fisheries and, as a result, can work in a manner that moves us towards those sustainability-premised solutions.

There is one important difference, though, to

DFO, as compared to all of the people that work in the sustainability field and on these issues, and that is because we are a regulatory agency, at some point if we do get ourselves to the point where there is a conflict or something that's unresolvable by negotiation, discussion, on that more sustainability-oriented front, we're uniquely well placed in that we can pass a regulation and enforce it.

So, at the end of the day, we can dictate the rules and we can make people comply, and if they choose not to, we will force them to, and only government - in this case DFO - can do that.

I mention as well that I would just touch very briefly on a more personal aspect to this. One of the things that regularly is pointed out to DFO - and certainly I have been on the receiving end a great deal - is this internal conflict. men and women that I have worked with at DFO across the country and in this province, joined DFO because they believe intensely in the environment and the protection and conservation of the environment. This is something people chose to do. So when people tell us that we are being unduly biased toward industry, that we can play on both sides of the fence so to speak, that we are perhaps not taking environment protection seriously, I have to say that from a personal and professional -- it's deeply offensive.

When I look at it from my own personal perspective, I come out of, as you read a few minutes ago, an environment program. This is my chosen field. Environmental-ism, if you will, is what I do. It's a big part of who I am. So for people to suggest to us that we are not paying sufficient attention to environment and that we're too focused on industry, is a suggestion that certainly I find very, very difficult to accept. The people that I work with I think would feel very much the same.

I can say personally I have never felt any kind of conflict between the two roles. I have never felt that I've been asked to err on the side of economic development or anything like that. Environment is always first and foremost for us, and so it's a long-winded way of saying I am very, very confident that not only can DFO address the

dual role that you've described, and in fact I would describe it in a more complex way, but not only can DFO do that, I think we must, and I think we are best suited to do so.

- Q Mr. Last, from the province's point of view, is there or was there, before the federal assumption of responsibility, was there a similar kind of a tension or conflict and do you have views on this question of a conflict?
- MR. LAST: Yes, there was, in, I imagine, in any resource development area within government that required attention to all of these complexities that Mr. Swerdfager describes, as they're -- similarly in the province, there were similar issues.

What we tried to -- or what we did was create some separation between the functions of resource development and enforcement, to keep them separate, and as much as possible, avoid any kind of a conflict. In my experience, similar to Mr. Swerdfager's, that didn't occur. It made sense to have the people who were the experts in the area involved in reviewing on either -- in both circumstances.

- Q Dr. Fleming, your experience includes having spent time and worked in Norway, but also doing work and having a sense of the picture internationally in terms of the management of aquaculture. From your point of view, do you identify a conflict, and do you have views or thoughts on how this should be addressed in Canada?
- DR. FLEMING: Firstly, I probably can't speak to the true conflict inside DFO if one exists. It's only -- I think what I can address is really the public perception of that.

I can speak about generally my experience in Norway where the organization is different. The primary role of the regulation of aquaculture falls under the Ministry of Fisheries and Coastal Affairs. But in that, the Directorate of Fisheries is the main leading body, but then the (foreign word), that's the Ministry of Health and Food Safety, has a role. The Directorate of Nature Management has a role which is concerned with environment issues, and then also the Directorate for Coastal Administration, so all four have a role.

The other thing that's somewhat unique in Norway, which is kind of surprising for a socialist country, is that they privatized a number of their research wings, so the wing that I worked for was formerly part of the Ministry of the Environment, but was privatized with the idea of separating management from research, or research from management. Again, whether it works or it doesn't, there is the public perception that there's a degree of independence there that's going on and I think that's valuable.

I think the other thing that's valuable is there tends to - and it could be valuable, and as Mr. Swerdfager mentioned, it could also lead to conflict - but there is a -- the discussion becomes more public. It becomes more open, and the information is more available for the public to make reasoned or unreasoned decisions about that information.

- Q I'm going to move to a different topic. Thank you for those answers, panel members.
- MR. MARTLAND: I'd like to bring up number 10, Mr. Lunn, please, on our list of documents.
- Q We'll see on screen in a moment the "British Columbia Aquaculture Regulatory Program, Licensing Approach." Mr. Swerdfager, or Mr. Thomson, perhaps you can assist me in just understanding. The date there is June 17, 2011. This is a presentation to the Departmental Management Policy Committee.
- MR. THOMSON: Yes, it is.
- And if we have a look on the second page and I'll use this really as the shorthand perhaps before reading that page, I'll simply really give you the question which I'm about to get to. The question, at a broad level, is to ask for an update and an understanding of where things stand in terms of the development of regulations and the development of policy by DFO for aquaculture.

So with that as the question, if we have a look here, you'll see the description given to this Policy Committee at the start is the department having achieved major progress in establishing the aquaculture regulatory program, makes reference to the regulations being published. It makes reference to Canada/B.C. agreement on aquaculture management, and to 701

licences having been issued, staff having been hired, and offices established.

We then see that, on the other hand, there's part of the foundation still being finalized. There's reference to a suite of policies, approaches and protocols, to licence fees, what are called IMAPs, Integrated Management of Aquaculture Plans, the Aquaculture Regulatory Information Management System, ARIMS, also the First Nations engagement strategy and management of First Nations litigation related to new licence issuance.

Then we see at the bottom, reference at the six-month mark having -- I should pause just to say that the context for all of this - and I won't be covering this in a narrative form today - but the Policy and Practice Report that has been put before the Commissioner sets out the background, what's often referred to as the *Morton* decision or the *Hinkson* decision leading to the federal assumption of responsibility in December 2010.

So in June of 2011, six months into program delivery, there's reference to having some experience in receiving licence-holder reports, commencing audits, inspections and compliance and management activities, receiving applications for amendments to licences as well as new licences. So I've really relied on this document to set some of the framework.

Could you give us, please, an update in terms of the policy and regulatory work that's now underway, where things stand, please?

MR. THOMSON: Certainly. Currently, from a policy perspective, the first suite of policies has gone through departmental approval and review process and we'll be posting those to our website in the near future, once translated. That includes sustainable aquaculture framework, the licensing approach, and public reporting approach.

We're working through review of the second suite of policies which are largely environmental management policies, and then we'll -- at the national level, we'll begin to develop the third suite of policies sometime over the course of this fiscal year.

In terms of where we are in delivery of the program, we've got the beginnings of a draft for

an integrated management of aquaculture plan, for finfish aquaculture, largely put together, still missing some substantial bits, but we're looking to go out with that draft in the fall of this year for consultation that'll provide advice into -- amendments to the draft and, of course, advice into ultimately making licensing decisions forthcoming.

We have an interim aquaculture regulatory

We have an interim aquaculture regulatory information management system called the interim licensing system that is tracking some of our licensing data, data systems, but we're still, I would say, working towards a much more integrated management system. There's an enormous amount of information coming into the Department that needs to be managed and tracked and we're working toward that. We're hoping that that's completed by the end of the this fiscal, which would be March 2012.

We have recently, from my office, sent letters out to First Nations, environmental organizations, provincial government and licence holders describing these steps and describing our planned engagement strategy going forward in the fall, so that we are trying to manage our communications with our user groups and with the First Nations.

In terms of the actual delivery of the program, as it says on the bottom we have staff on the water who are conducting audits, inspections, following up on complaints and investigations and starting to consult with various parties on reviews of the conditions of licences that were first put out last year.

MR. MARTLAND: Mr. Registrar, I don't believe I paused to mark this as an exhibit. I should do that. So perhaps this might be, I think, Exhibit 1588?

THE REGISTRAR: That's correct, 1588.

EXHIBIT 1588: Document titled, "British Columbia Aquaculture Regulatory Program, Licensing Approach."

MR. MARTLAND: I'm finally learning to give you the numbers and try and go that route if I can do so.

Q With respect to the question of siting -- and perhaps I can do this by going to number 23 on our list of documents.

- MR. MARTLAND: Mr. Lunn, that is something different than what I have at Tab 23 of our list of documents.
  - MR. LUNN: Just a moment, please, that's my error.
  - MR. MARTLAND: That's fine. It's hard to see on the screen, but there's a "Draft Confidential" stamp or watermark on these sheets.
  - This is set out, seems to be, in draft format, but I take it, Mr. Thomson, this is the proposed or draft applicant form; is that right?
  - MR. THOMSON: Yes. The Department of Fisheries and Oceans and the provincial agency responsible for land tenuring forest lands, natural resources operations, have been working together in a series of meetings to develop what we term a harmonized application form to support the information requirements of the two agencies and use one format.
  - Q All right.

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- MR. THOMSON: So it's not quite finalized. There's a meeting at the end of this week, actually, to continue to work on it.
- MR. MARTLAND: Okay. If this might please be Exhibit 1589.

THE REGISTRAR: So marked.

EXHBIIT 1589: Draft Finfish Aquaculture Application Form

#### MR. MARTLAND:

- Q If we turn to page 5 of this document -- and I'll just pause to observe the Policy and Practice Report on page 45 gives the same thing, which is the siting criteria that are employed with respect to the decision about situating or siting a new aquaculture facility.
  - Mr. Last, I'll ask you as well as Mr. Thomson and Mr. Swerdfager to please join in if you have further comments, how were those criteria developed?
- MR. THOMSON: Well, I'll take the first crack at this. The criteria were largely the result of the recommendations came out of the Provincial Environmental Assessment office, Salmon Aquaculture Review, and at that point brought forward by the province, but obviously in consultation with the Department of Fisheries and

Oceans at the time. We've adopted these siting criteria in our -- and have been in use for a 3 considerable period of time, obviously, and we're 4 continuing to use them. 5 Mr. Last (indiscernible - overlapping voices). 6 MR. LAST: They're mostly, or they are direct from the 7 Salmon Aquaculture Review recommendations. 8 In terms of the sort of life, the history, I suppose, of this set of criteria, do they predate 9 10 the *Morton* decision? Do they overlap both the 11 provincial period of jurisdiction and the present 12 federal regime, so to speak? 13 MR. THOMSON: Yes, and they certainly predate the 14 Morton decision. They were in place sometime 15 after 1997. 16 All right. And the Salmon Aquaculture Review, all 17 this again is some context that's set out in the 18 If you can help me on the dates, is that a 19 1997 date on the Salmon Aquaculture Review? 20 MR. LAST: Yes, the final report was 1997. 21 Mr. Last, that's a process indeed that you were 22 quite involved in, not necessarily the report, but 23 the work that came out of the SAR? 24 MR. LAST: Yes. 25 With respect to these criteria, we'll see included 26 amongst these, the first one: 27 28 At least 1 km in all directions from a First 29 Nations reserve, unless consent is 30 received... 31 32 And the letter is appended. Secondly: 33 34 At least 1 km from the mouth of a salmonid-35 bearing stream determined as significant. 36 37 You won't be surprised to hear me say that some 38 people have criticized these as not being 39 sufficiently stringent. 40 Dr. Fleming, I wonder if I could ask if you 41 have any comments on the criteria that are used 42 here, and perhaps stepping back as to siting 43 decisions in other parts of the world and whether 44 there may be lessons that you think could apply to

Okay. Of course, I can probably only

speak to the second one that you mentioned, one

DR. FLEMING:

Canada.

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kilometre from the mouth of a salmon-bearing stream. Now, I haven't seen the reasoning behind this, and nor was any reasoning given here. It strikes me as - knowing something about it having studied salmon for a long time - as somewhat arbitrary given the migration paths of the fish, the interactions, the dispersal of diseases and pests, parasites, and the potential for escape interactions with other streams. I guess -- and it strikes me that the word "significant" is a rather vague term.

So overall, that particular criteria strikes me as being rather vague and unspecific, and the scientific basis for it is not clear to me.

- Q Mr. Thomson or Mr. Last, would you care to respond to some of those concerns?
- MR. THOMSON: I'll take it. I think that what's clear here is that this is a siting criteria that they use in the initial screening. It does not indicate that this is the only criteria being used to apply to the decision as to whether or not a licence will be granted or not. That'll go through an assessment by biologists -- I mean, the process has changed since the *Morton* decision, but certainly prior to the *Morton* decision, we go through an assessment by Habitat biologists and an assessment, quite often, the *Canadian Environmental Assessment Act*. So it's not that

Environmental Assessment Act. So it's not that the screening criteria are the only things that are being applied in order to determine if the site can be licensed or not.

But, having said that, certainly it would be an area that the Department would seek to review those siting criteria for additional input given that they are from 1997, now that we have taken over the primary management control of the aquaculture industry.

- Q Mr. Last, anything to add on that?
- MR. LAST: When I became involved in government with aquaculture, it was at a time following the Salmon Aquaculture Review when we were looking at the recommendations and how best to harmonize the provincial and federal requirements as an overlapping regulatory, as we saw it at the time, matter.

The environmental concerns specifically related to fish habitat were issues that we

discussed and worked together on. If I remember correctly, we looked at what was being done in other jurisdictions and, at that time, didn't have a lot of guidance that way, and then were left to really look for a "made-in-B.C." solution. It was through discussion, mostly between the two governments, that many of these were developed. Dr. Fleming, you had something to add, sir?

- DR. FLEMING: I did not answer the second part of your question, whether there's experience from elsewhere. The experience I have is from Norway, also was involved in Iceland's decision about zoning and the location of farms and identification of national rivers and national fjords with particular information, and decisions made on migratory paths, et cetera, of the fish and interactions with major important salmonbearing streams led to the zoning of particular areas within each of those countries as being significant and worthy of protection, and also continued research investigating the viability and suitability of these different zones, how effective they were at their objectives of protecting these particular rivers or fjords from other effects.
- Is that something that is sometimes referred to as being a "coastal zone approach"? Or does that describe something different?
- DR. FLEMING: I think it's a component probably of a coastal zone approach. It's one specific identified criteria of a species that's of interest. In this case, it's Atlantic salmon, and that was designed to protect that particular species.
- Q And what are the other elements or components of a coastal zone approach?
- DR. FLEMING: Well, it would be other -- I mean, it would involve all uses and the sustainability of the marine environment protection, of the environment and its processes and major contributions to sustainability.
- Q I wonder, since you have the mike just now, if I can follow up, and appreciating, just to narrate the question, this is a question that goes beyond purely a siting and licensing question, but unlike other panel members, we don't have you returning later this week.

So since you are here, and I wonder if you could offer any views or perspectives you have from your work with respect to topics that you've worked on, such as monitoring for disease, on escapes, on sea lice management. Do you have comments on those sorts of topics and do you see particular lessons for the B.C. aquaculture regime?

DR. FLEMING: I should clarify most of my work is with escapes, less so with disease and associated things. The lessons I think - one of them as we talked about - is a zoning protection of salmon-bearing rives as well as migration corridors is probably quite important. Also, I think, the recognition that the governments have placed on the potential dangers posed by aquaculture, and that they have recognized the risk, and associated with that risk, they have gone forward and tried to mitigate those risks as best they can. Obviously, there's trade-offs. So those are things.

Also I think there is - and again mostly speaking from the Norwegian perspective - access to data and information is available. And a good idea this is -- a lot of the criteria that have been associated with the development of net pens. They have a Norwegian standard for net pens and the moorings for net pens. In fact, I think this has led to a dramatic decrease in escapes from starting in 2007. Prior to 2007, a number of escapes had been nearly a million. After 2007, it dropped down to about a quarter of a million, and this was related to the -- appears to be related to imposition of strong standards for the development of nets, the standards for replacement of nets and the locations in the fjords.

A lot of that came about by accessed information about what was going on, when major escapes occurred, and the opportunity for independent investigations of the causes of those escapes so that technical standards could be developed to deal with those escapes. So there was sort of a very proactive positive approach to that, and openness, and I think it benefited all having that approach.

Mr. Swerdfager, you had something to add, and then I'll move on to my next topic. Go ahead, though.

MR. SWERDFAGER: Thanks. One final bit of context. When you look at these criteria taken as a whole, obviously not all of them would be applicable in every part of the world or the country, but I can tell you, because of the nature of the job that I have, I'm quite actively involved - or rather was prior to changing jobs - in the management of aquaculture in other parts of the country.

These criteria are as or more stringent than those that are in place for the management of aquaculture in Nova Scotia, New Brunswick and I have also spent a considerable Newfoundland. amount of time working with colleagues in Scotland, in Ireland and in Chile, and a little bit in Wales, and I can tell you that, again, these standards are as or more stringent than the same type -- they don't use the exact same format so I'm not sort of comparing directly apples to apples, but the standards and the things that sit underneath them, so to speak, in this particular set of criteria, are substantially -- or at least as stringent, in many cases substantially more so, than the other jurisdictions I've mentioned.

- If I could pick up on something that Dr. Fleming just referred to, he made a comment about public access to information. We've heard a little bit about that indeed in the last week or so in this hearing vis-à-vis data that's been acquired and assembled by both the industry and also by the provincial government during its time overseeing aquaculture.
- MR. MARTLAND: If I could indeed go to number 12, please, on our list of documents to frame this discussion.
- Q This bears a recent enough date of July 10, 2011. It is in draft form. Mr. Swerdfager or Mr. Thomson -- Mr. Swerdfager, I appreciate you've moved over to C&P and so you're busy in a new position, although no doubt also knowledgeable about what's going on at AMD. This is the public reporting draft approach, I suppose, or a document describing what is proposed for public reporting; is that correct?
- MR. SWERDFAGER: That's correct, yes.
- MR. MARTLAND: If this might please become, I thin, 1590 is the number.
  - THE REGISTRAR: That's correct, 1590.

> EXHIBIT 1590: British Columbia Aquaculture Regulatory Regime Public Reporting of Regulatory Information Under the British Columbia Aquaculture Regulatory Regime

#### MR. MARTLAND:

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With respect to this question, indeed last night Mr. Taylor sent around an email that gave us some website information, and I don't propose to take you to that, but I take it there's been indeed, as of last week, recent changes in terms of the provision of information to members of the public about fish farms, about sea lice, about what's going on at fish farms in this province.

I wonder if you could offer us your comments on the Department's approach to public access to information, and if you're in a position to make a commitment with respect to continuing to make information public.

MR. SWERDFAGER: Thank you. I think that just by way of context in answering that question, I think that one of the principles that guided the development of the Pacific Aquaculture Regulation was to substantially enhance the transparency of the aquaculture industry in British Columbia. So the way the regulation is set up and conditions of licence that flow from it has a very strong emphasis on the provision of information to the Department by the industry operators.

I think it's important to emphasize that these are terms and conditions that we are requiring. We are not going to have a discussion with farmers as to what we would like to get from them and how we would like to get it from them and so on. The discussion is very much one of "our modem is stuck on send". We're just telling people here's what you shall produce, and within reason, here's how you shall produce it. Obviously we'll have some discussion in terms of modalities around that, but we are compelling the production of certain information from farmers in a very, very detailed and rigorous way.

We intend to share the vast majority of that information. This policy document that is in draft sets out how we intend to do so. There are some nuances still to be made to it. There are some corrections and updates to it. But generally

speaking, the thrust very clearly here is to take the information that we glean from finfish, shellfish and freshwater aquaculture operations in this province, to make it publicly available.

We set about building an information management system to allow us to do that effectively. We had made comments to the effect in public that we had hoped to have that system up and running in April or May. We have certainly been a little bit late on that, but much of that information is now up on the website. It went up last week. It will continue.

The only thing is that we are proposing - or intending, rather - to withhold are things that are very clearly of a private nature, individual's names, addresses, phone numbers. That stuff is often contained, for example, in licences, and we will not be disclosing that sort of information. But all the information that we get from the operation of the industry will be shared publicly, regularly. I can't tell you today it will be published on the second Wednesday of every month or something like that, we're not down to that stage, but it will be very regular and very easily accessible.

Well, timing is everything, and it's interesting timing to have that indeed available before your testimony, and as we ask you questions around public reporting.

With respect to a different topic, I have a question, really, at a broad level about stakeholder involvement, consultation, and comanagement in particular with First Nations. We've heard the complaint made that the DFO has not engaged in adequate consultation with First Nations, is not truly interested in co-management.

Mr. Thomson, I know this is an area that you've worked in. Part of the context for some of those concerns - and perhaps you can help to explain the process here - is in terms of the process for having grandfathered the existing licences for aquaculture facilities - and I can't remember the date in December 2010 - but I take it effectively existing licences were grandfathered. I would be interested to know about what the process was and who made decisions about the manner in which existing licences were

grandfathered by DFO.

So there's a broad question and a narrow question tucked into one big question.

MR. THOMSON: Thank you. In terms of the broad question of how we approached consultations going forward into making the licence decisions for December 19th, 2010, we began with consultations very early on in the spring of 2009. We had two sessions with First Nations groups, one in Campbell River, one in Vancouver, to discuss the impacts of the *Morton* case.

As we moved forward in terms of developing the regulation, we went through an amended AAROM -- sorry, Aboriginal -- sorry.

- Q I know it's in the PPR, so we can connect the dots later.
- It's an aboriginal program for --MR. THOMSON: Yeah. that the Department of Fisheries and Oceans has for supporting aboriginal collectives or groups in accessing ocean and resource management funds. we went through an AAROM agreement amendment with the First Nations Fisheries Council and the Aboriginal Aquaculture Association to host meetings for us to gain input into the drafting of the regulations. So there's two meetings hosted by the Aboriginal Aquaculture Association, and nine meetings, I believe it was, hosted by the First Nations Fisheries Council in which I attended and gathered what I considered to be extraordinarily valuable input into not just the drafting of the regulation, but also other aspects of First Nations' views on the management of aquaculture.

Then as we moved forward through the drafting of the regulations and starting preparing ourselves for determining -- making licence decisions in December of 2010, we began to send letters out to individual First Nations describing what our baseline conditions in licences were planning to be, seeking their comment. That was in the fall of 2011. And then as we --

Q Fall of 2010, I'm sorry?

MR. THOMSON: Sorry, fall of 2010. Thanks for the correction. And then as we got closer to the December -- so also in the fall of 2010, we had individual bilateral meetings with several First Nations who had requested it, as we could arrange

them, and then on about December 19th, 2010, we took those considerations to mind and made decisions as to the licences issued to the finfish, shellfish and freshwater aquaculture operations that were currently operating.

Two of the decisions we took in making that licensing approach were, one, we chose not to amend the production amounts or species being licensed at any of the aquaculture facilities, so we would not change those amounts in order to keep, if you will, the status quo in place, recognizing we had a very limited amount of time to consult with First Nations and other parties on any potential changes.

The other choices we made is to have a very short -- or have a short or limited period of duration of licence of one year for finfish, and up to 18 months for shellfish licences and freshwater licences in order, again, to provide opportunities to getting further insight and consult with First Nations as to future licensing decisions.

Since that time, we've begun consultations on the development of the Integrated Management of Aquaculture Plans. In January again we entered into agreements with the First Nations Fisheries Council to produce a report for us as a result of meetings they held throughout British Columbia as to input into the design of the Integrated Management Aquaculture Plans and we're using that report as input as we start to design that first draft of Integrated Management Aquaculture Plans.

As I mentioned previously, we've now informed all First Nations by letter from my office as to our plans going forward for this fall. So, you know, I think the sort of kernel of that is what we're really trying to do is find as many opportunities as possible to communicate with First Nations and with other stakeholders as best as possible within the resource and time constraints that we all face.

- MR. MARTLAND: And in relation to your point about time constraints, I'm going to cede the microphone. I have counsel for Canada next at 30 minutes.
- MR. TAYLOR: Mitchell Taylor, and with me is Jonah Spiegelman. We're counsel for the participant Government of Canada.

# CROSS-EXAMINATION BY MR. TAYLOR:

My questions are going to be mainly for Mr. Swerdfager and Mr. Thomson. Time is short, as Mr. Martland has noted, 30 minutes I have. We can't cover everything that I think should be, but with that, we'll start in.

I want to begin by comparing the relative amount of involvement of the province and the federal government in the old regime versus the new regime, and then making a point about both being involved, if that is your evidence.

Mr. Last, and Mr. Thomson and Mr. Swerdfager, as I understand it, under the old regime - and I may have the percentages wrong but you'll get the idea I think - under the old regime, the province had 80 percent or more of the role in responsibility for aquaculture and the federal government 20 or so. Under the new regime, it's the reverse. The province has only a little bit and the federal government, the most. Is that a fair characterization, gentlemen?

- MR. LAST: I'd say the reversal characterization is very accurate. The number, again, as you say, are subjective.
- Yes, I don't mean to fix on those numbers. Just to understand your question, Mr. Last, you said the reversal situation is correct?
- MR. LAST: The burden has shifted more towards the federal government.
- Q Right. All right. So before it was mostly the province and now it's mostly the federal government you're saying.
- MR. LAST: Yes.
- MR. THOMSON: Sorry, Mitch, I'd just like to clarify one point in there. While the percentages are one indicator, both agencies always held a veto, in that a site could not go ahead without both agencies saying yes to it.
- Q Under the old regime --
- 41 MR. THOMSON: Or new, yes.
  - Q -- or the new regime; is that correct?
- 43 MR. THOMSON: Yes.
  - Q The province still holds sway over the siting, I take it, under the new regime; is that right?
  - MR. LAST: Yes, that's correct. And over the siting, I'd be more specific in saying in granting the

1 land tenure. 2 All right. And the point being that, at all 3 times, we've had both governments involved, 4 whether more or less; is that right? Now, this --5 MR. LAST: Yes. 6 -- is a B.C. only approach, isn't it, by reason of 7 the **Morton** decision. It's not applied elsewhere 8 in Canada, is that right, Mr. Thomson? 9 MR. THOMSON: Yes. 10 I'd like to turn, if I may, to Tab 32 of Canada's 11 book of documents. Mr. Swerdfager and/or Mr. 12 Thomson, do you recognize that document? 13 MR. THOMSON: Yes. 14 Can you briefly say what that is and what's 15 covered by it and what's its purpose? 16 MR. THOMSON: It was a briefing prepared for a senior 17 policy committee, the Economic Prosperity 18 Strategic Outcomes Committee, to describe both the 19 current position of the development of the B.C. 20 Aquaculture Regulatory Program and also to 21 describe the first groups and policies in what's 22 called policy suite 1. 23 All right, thank you. May this be marked MR. TAYLOR: 24 as the next exhibit, please? 25 THE REGISTRAR: Exhibit 1591. 26 27 EXHIBIT 1591: British Columbia Aquaculture 28 Regulatory Program Policy Discussion, Police 29 Suite 1, Economic Prosperity Strategic 30 Outcomes Committee 31 32 MR. TAYLOR: If we could turn now to Tab 33 of Canada's 33 document book, which is now Exhibit 1588, if I 34 have the number right. This is a deck dated June 35 the 17th of 2011. 36 Again, Mr. Swerdfager or Mr. Thomson, you've 37 indicated to Mr. Martland what this is, which was a deck to provide a briefing. I'd like to go, if 38 39 I may -- well, firstly, let's go to slide 3 if we 40 could. You'll see at the top there the "Purpose

MR. THOMSON: Yes, it is.

purpose of this deck, is it?

Q And if we could turn now to slide 4, please, this is entitled, "Overall Management Approach". I'll

of Today's Presentation." I take it that that first bullet - well, all the bullets - but in

particular the first bullet is an outline of the

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let you choose, Mr. Swerdfager or Mr. Thomson, who
to go first, but I'd like one of you to describe
what you see here and explain briefly what it's
saying.

MR. SWERDFAGER: I tend, by nature, to on occasion to

MR. SWERDFAGER: I tend, by nature, to on occasion to be somewhat of a visual thinker, and so I asked that we put together a bit of a graphic that would allow us to explain what it is that we're doing in British Columbia in, what I think anyway, is a fairly simple slide.

So essentially when you look at the comprehensive management regime that we've built with respect to aquaculture in British Columbia, we are working on a set of authorities which are already in place for the most part, and I think it's important to emphasize that even though we talk, of course, most specifically about the Pacific Aquaculture Regulations as the graphic here indicates, they flow from the Fisheries Act. They should be viewed as a part of the Fisheries Act regulatory and legislative regime overall, which includes a number of factors, not just the content specifically of the Pacific Aquaculture Regulations. But on the left, it sets out the authorities from which the program flows.

As Andy mentioned earlier, we're in the process now of developing a series of guidance documents and they are at various stages in their production, but essentially those will guide the operation of the program that Andy leads, and will provide specific direction in terms of how we go about exercising our authorities.

The third area of course touches on the way we will ensure that our authorities, and to a considerable degree, the guidance documents are complied with. So it sets out the enforcement tools that we intend to use, how we will move forward in ensuring - if you were to expand upon that column, so to speak - how we will ensure compliance with the regime that we're talking about.

So taken together, what this is, is sort of a graphic interpretation of the whole ball of wax, so to speak, in terms of our management regime. All right, thank you. And you mentioned earlier one of the principles that is underpinning the new federal retime in British Columbia for aquaculture

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45 46 47 is transparency. Are there other particularly important principles that underpin the regulatory regime that we now have?

MR. SWERDFAGER: I think that there are a number, and I think that certainly protection of the environment is at the top of the list. It's certainly something that flows, again, from the Fisheries Act. To go back to one of the responses I made to Mr. Martland earlier on, protection and conservation of the environment is written right into the **Fisheries Act**. It's not a discretionary thing in any way, shape or form.

So certainly we designed the regulation to ensure that that's addressed. We designed the regulation to ensure that its administration could be as efficient and cost-effective as possible. As a result of this new regulation, the amount of overhead of a regulatory nature that's placed on the industry in British Columbia has dropped substantially. Where you used to have a requirement for four provincial permits or approvals, you now have one.

At the federal scale, we have integrated the majority of our permits and requirements into one, so from a regulatory burden perspective, we're substantially more effective.

An additional principle we wished to strive for is to be as comprehensive as possible. believe that we've structured the regulation in a manner that allows us to address all aspects of aquaculture management, not just finfish, but shellfish, freshwater and anything else that we think could come to us.

We also have designed the regulation to ensure that it is enforceable, which perhaps is a statement of the obvious, but again, is something we spent a fair bit of time on.

Then, as you've already mentioned, transparency is a key factor in this regulation. We have looked at the regulatory regimes in place in other countries, in other jurisdictions within Canada, and we have worked very hard to take the best of those that we could and to make sure that this regulation puts in place a management regime that is as transparent as possible.

All right. Thank you. Slide 5 appears to deal with some of the independent policies and their

framework of independent policies. I think we can leave that. If we move to slide 6, there is a sentence at the top of the page where it says:

...the program has been designed so that habitat impacts are managed through the aquaculture licence with no separate **Fisheries Act** section 35 authorizations.

Could you, Mr. Swerdfager, just briefly explain

what's meant by that, how it operates and what's

the rationale for that in a sentence or two? MR. SWERDFAGER: Yeah, thank you. Essentially in the past, because of the way the administrative regime was set up, we used to issue HADD authorizations with respect -- or, sorry, s. 35 authorizations with respect to finfish farms. With the way the new regulation is set up, the matters that were previously addressed by those authorizations are now covered as conditions of licence. There's no longer a need for a separate HADD authorization because the matters are now covered under the regulation. So we will no longer have separate authorizations for that, or incidentally where we used to have introductions and transfers, licences or permits issued under s. 56, so the Fisheries General Regulations, those two are now going to be covered under the single aquaculture licence.

Q All right. If we turn to slide 9, it says there that until the Cohen Commission has issued its final report and consideration has been given to that, that they're not being intent to authorize any new marine finfish aquaculture operations. Has that recommendation been put in place?

- MR. THOMSON: A recommendation has been put in place that we would not consider a marine finfish aquaculture -- a new marine finfish aquaculture operation -- or, sorry, not consider -- authorize any new ones where the impact to the environment would be greater than the one being potentially replaced. That decision has been transmitted out to various client groups as well as to all First Nations in British Columbia.
- Q All right. Next, if I may, I'd like to move briefly through the forms of licence that exist. In doing this, I'm not going to address shellfish as I don't think it bears on what we need to deal

1 with here. MR. TAYLOR: But if we could go first to Tab 13 of 3 Canada's book, please, Mr. Lunn. I don't think 4 that's Tab 13. There we are. 5 Now, Mr. Thomson, I'll ask these questions of you. 6 Firstly, am I correct that there's four finfish 7 aquaculture licences now in place, or now existing 8 for templates? 9 MR. THOMSON: For general templates, yes. 10 And you see Tab 13 up on the screen. Is this the 11 one for freshwater finfish? 12 MR. THOMSON: Yes, this is for commercial freshwater 13 aquaculture operations. It would also apply to 14 some activities that occur on land. They're 15 actually cultivated in saltwater as well, so... MR. TAYLOR: All right. May this be the next exhibit, 16 17 please. 18 THE REGISTRAR: Exhibit 1592. 19 20 EXHIBIT 1592: Template for Freshwater 21 Aquaculture Licence, DFO 22 23 MR. TAYLOR: If we may go to Tab 14, please, and as 24 it's coming up, I'll say that this is Exhibit 25 1463. 26 Is this the licence for what are sometimes termed 27 "major enhancement facilities", or those operated 28 by DFO? 29 MR. THOMSON: Yes. This is the licence issued to 30 Salmon Enhancement Program operated facilities in 31 British Columbia. 32 MR. TAYLOR: And if we turn next to Tab 15, please? 33 Is this the form of licence issued to smaller 34 enhancement facilities, sometimes called 35 "community facilities"? 36 MR. THOMSON: It is the type of licence that those 37 smaller facilities will operate under. 38 actually issued to the community advisor who is an 39 employee of the Department of Fisheries and 40 Oceans. 41 MR. TAYLOR: Okay. May that be the next exhibit, 42 please? 43 THE REGISTRAR: Exhibit 1593. 44 45 EXHIBIT 1593: Template for licence to 46 conduct salmon enhancement activities issued

to community advisor

- MR. MARTLAND: And I think the prior one, the SEP main facilities one may not have been marked as an exhibit. I may have missed it. If it wasn't marked, perhaps it could be marked as well.

  MR. TAYLOR: Are you able to tell, Mr. Lunn, if it's
  - MR. TAYLOR: Are you able to tell, Mr. Lunn, if it's 1463?
  - MR. MARTLAND: Ms. Grant tells me that it may already be Exhibit 1463, so I may have missed that. Thank you.
  - MR. TAYLOR: Do I get one minute, Mr. Martland?
  - Q If we turn next to Tab 16, I don't -- sorry, I've lost my count in exhibit marking here. But if turn to Tab 16, is this the form of licence that's issued to the finfish fish farms of a commercial nature, the ones that we're talking about mainly in this round of the hearings?
  - MR. THOMSON: Yes, this is the general template for those farms.
  - MR. TAYLOR: And may that be the next exhibit, please? THE REGISTRAR: Exhibit 1594.
  - MR. TAYLOR: Thank you.

EXHIBIT 1594: Template for licences for commercial finfish fish farms

### MR. TAYLOR:

- Now, I'm going to, in the interest of time, just leave that licence untouched in terms of delving into the content, but as a general question, is it fair to say that the licence terms are very comprehensive and complete in terms of what they're covering?
- MR. THOMSON: Yes. I would say they're very comprehensive. They're about 98 pages long. They're one of the more comprehensive or complete licences we, as the Department of Fisheries, issues.
- Q And is this the document that's then used to require the various pieces of information that farms provide to the Department?
- MR. THOMSON: It requires not only record-keeping but reporting of that information in various places of the document, yes.
- Q Does it also require husbandry, proper husbandry?
- MR. THOMSON: Yes. It requires adhering to fish health management plans.
  - Q And in fact, first developing fish health

1 management plans; is that right? 2 MR. THOMSON: And developing fish health management 3 plans, yes. 4 And I won't go through the list, but it monitors 5 for sea lice, pathogens, disease, et cetera? 6 The sea lice, pathogens, disease, benthic MR. THOMSON: 7 monitoring, escape prevention protocols, et 8 cetera. 9 And is there rationale underlying the level of 10 detail that's put into the licence and the 11 requirements made of the fish farm operators? MR. THOMSON: Well, the rationale is to provide a 12 13 detailed document that sets out explicitly what 14 the requirements are of the operator, and to allow 15 for enforceability should those requirements not 16 be met. 17 And what are the tools for enforcing that? 18 MR. THOMSON: Well, we have, under the Fisheries Act, a 19 suite of enforcement tools for conducting 20 compliance for the farm companies. We have no 21 ticketable offences under the Pacific Aquaculture 22 Regulations so if there are charges that go forward, they have to go forward to court. 23 It's perhaps obvious, but just to be clear, when 24 25 did the forms of licences we've just looked at 26 come into being? 27 MR. THOMSON: The original drafts of the forms of 2.8 licences were drafted over the period of time of 29 the fall of 2010, but the issuance of this licence 30 came into effect December 19th, 2010. 31 And are these the licences - that is, what's now 32 Exhibit 1594 - are these licences that are a one-33 year licence for each of the farms? 34 MR. THOMSON: Yes, they are. 35 And so they expire again in December of this year, 36 do they? 37 MR. THOMSON: Yes, they do. In the course of 2011 and through the fall that 38 39 we're about to enter, is there going to be, or is

there a review of the terms of licence?

MR. THOMSON: Yes, we began the process to review the

terms of licence, to make corrections where

required, improve the terms and collect for

clarification, et cetera, so we've begun that

process already. We have had one meeting now with

industry to discuss potential changes, and we've

sent letters out to various groups seeking advice

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1 as to potential changes. And those are the letters that you referred to 3 earlier in answer to Mr. Martland, are they? 4 MR. THOMSON: Yes, they are. 5 And that includes First Nations, does it? 6 MR. THOMSON: Yes, it did. 7 THE COMMISSIONER: Mr. Taylor, would this be a 8 convenient spot? 9 MR. TAYLOR: Yes. 10 THE COMMISSIONER: Thank you. 11 THE REGISTRAR: The hearing will now recess for 15 12 minutes. 13 14 (PROCEEDINGS ADJOURNED FOR MORNING RECESS) 15 (PROCEEDINGS RECONVENED) 16 17 THE REGISTRAR: The hearing is now resumed. 18 19 CROSS-EXAM BY MR. TAYLOR, continuing: 20 21 Mr. Thomson, has there been a situation where the 22 province has approved a site or tenure, as Mr. 23 Last points out, and the federal government has 24 declined or refused to provide a licence of 25 permission? 26 MR. THOMSON: Yes. Under the previous regime there 27 was, to my knowledge at least, four instances, and 28 there may have been more, in which the outcome of 29 the Canadian Environmental Assessment Act 30 screening or the habitat review was such that we 31 were not willing to go ahead with the site and the 32 site was turned down. 33 And that likewise could happen under the new 34 regime, that is, the province could approve a 35 tenure and the federal government sill wouldn't 36 license? 37 MR. THOMSON: Certainly, but, you know, the intent 38 under the new MOU that was signed in December of 39 2010 is to try to -- while we cannot harmonize our 40 decision-making authorities, because of course 41 that would fetter our individual ministers' 42 authority, our intent is to try to synchronize our 43 decisions as best as possible, so we don't have 44 this one decision coming several months before or 45 after another, which is, you know, not 46 particularly good client service, or good service

to the public.

- 1 So by that do you mean the aim is to work in concert and to as much as possible reach a similar 3 conclusion on a given application? MR. THOMSON: Well, I don't know if you would 5 necessarily say reach a similar conclusion, but 6 rather reach a conclusion in a similar time period 7 so we don't have the juxtaposition. I think it's 8 obviously the provincial government and the 9
  - federal government have different mandates and different, you know, different points of decision to make, and therefore it is, you know, certainly reasonable that within each decision-making matrix they could come to the different decisions, but to try to reach that decision in the same time period is really...
  - All right, thank you. If we might go to Tab 2 of Canada's book, please. I simply want to see if you can identify this document, Mr. Swerdfager and what it is, and then I'll enter it as an exhibit if you can, and won't ask questions about it.
  - MR. SWERDFAGER: Yes, I can identify it as a memo that was sent up in July of this year.
  - And that's on the topic of just what the title says, licensing decisions for B.C. during the period of the Cohen Commission being in operation? MR. SWERDFAGER: Correct.
  - MR. TAYLOR: And the recommendation is set out towards the end, of course. May that be the next exhibit, please.

THE REGISTRAR: Exhibit 1595.

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EXHIBIT 1595: Memorandum for the Minister, Licensing Decisions for British Columbia Aquaculture During the Cohen Commission, July 27, 2011

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- Then if we might go to Tab 7, Mr. Thomson, this is a letter of August 16th of this year, apparently signed by you. Can you identify that?
- 41 MR. THOMSON: Yes, I can. 42
  - What is that?
    - MR. THOMSON: As I stated earlier, it's a letter that was sent out to the provincial government. one at the top here is to the Provincial Government Directors' Aquaculture Committee Colleagues, which includes both provincial

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agencies and Transport Canada and Department of Fisheries and Oceans, to inform of the decisions made regarding our decision-making process during the period of the Cohen Commission, and also an update on our management framework. This -virtually the same letter was sent to licence holders, First Nations and a group of environmental non-government organizations that was -- the list was provided to us from our consultation secretary.

MR. TAYLOR: All right, thank you. May that be the next exhibit, please.

THE REGISTRAR: Exhibit 1596.

EXHIBIT 1596: Letter from Fisheries and Oceans Canada, Pacific Region, Andrew Thomson, to Directors' Aquaculture Committee Colleagues, August 16, 2011

# MR. TAYLOR:

If we might now have up on the screen, please, Mr. Lunn, the document Mr. Martland referred to. sent in an email last night -- no, not that one. That one, thank you.

Now, Mr. Thomson or Mr. Swerdfager, I'll ask you to identify this. What we've done is go to the DFO website and then take snapshots and I hope you're going to recognize this. But you can see, and maybe just scroll for the first three, Mr. Lunn, in three snapshots, this is -- aims to be the home page for the Aquaculture site on the DFO web. Do you recognize that?

MR. THOMSON: Yes, I do.

- And if you just scroll back to, I think it's the second one, Mr. Lunn. You'll see there on the right side "Public Reporting". Is that the place on the website where one would go and open up and get the information that you can see listed there? MR. THOMSON: Yes, it is.
- And that's the public reporting of information that you or Mr. Swerdfager referred to earlier in answer to Mr. Martland, is it?
- MR. THOMSON: It is the selection of public reports that are currently available. More will be added as they become available.
- All right. Now, if you could just scroll down, MR. Lunn, please, at a pace that Mr. Thomson can

see what you're scrolling through, without taking too much time. You can keep going. You'll see 3 that there's different topics coming through. just keep going, I think it's fine. We'll see a 5 chart that should come up now, I think. 6 Now, is that the kind of information you're 7 putting on the website, Mr. Thomson? 8

MR. THOMSON: Yes, it is.

All right. And these are -- these have been pulled out of Canada's Tab 36 to 44, and in the interests of time I'm not going to go through everything here, but I'm going to ask that this compilation be the next exhibit, if it may.

THE REGISTRAR: Exhibit 1597.

EXHIBIT 1597: Compilation of DFO websites re Aquaculture Management, Public Reporting on Aquaculture in the Pacific Region

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- And you mentioned that some more is going to be put on it. What other things are going to be put on by way of reporting and when might that be occurring, and why isn't it up now?
- MR. THOMSON: Well, I think as we review the reports coming in from industry we'll determine as much as possible what can be put on the website. Things such as benthic monitoring, summary reports of escapes, reports of other fish health events beyond just the sea lice reports that are currently on. That's the type of information that we envision going on the website, as well as copies of the licenses would ultimately be up on the website, as well, as opposed to now we have a table of the licences. So I think there's a number of pieces of information we intend to put up on the website. Our intent is to have them up there as soon as possible, and I hope over the next three to six months to continue to populate the website with increasing amounts of information.
  - All right, thank you. If we might go to Tab 17. Do you recognize that document, Mr. Thomson or Mr. Swerdfager?
- MR. THOMSON: Yes, I do.
- 46 Okay. And what's that?
- 47 MR. THOMSON: It's the document describing the

Sustainable Aquaculture Fisheries Framework, which is really sort of the overarching framework under 3 which we're going to situate a number of policies that will guide our management of aquaculture. 5 MR. TAYLOR: Okay. I'm going to ask that this be 6 marked as the next exhibit, please. 7 THE REGISTRAR: Exhibit 1598. 8 9 EXHIBIT 1598: British Columbia Aquaculture 10 Regulatory Regime: A Sustainable Aquaculture 11 Fisheries Framework (DRAFT), June 29, 2011 12 13 MR. TAYLOR: 14 Is it draft? Yes, it says at the end it's draft. 15 Do you know if it's -- on this copy. Do you know if it's final now? 16 MR. THOMSON: 17 There is a finalized version that has 18 been signed off, yes. 19 All right. Tab 18, same question, can you 20 identify that very quickly? I think this may be 21 Exhibit 1590, but I can't quarantee that. Do you 22 recognize that, Mr. Thomson? 23 MR. THOMSON: Yes, I do. It's the description of the 24 policy around public reporting and regulatory 25 information for the B.C. Aquaculture Regime. 26 Okay. It's a different -- it's the same document 27 with a slightly different date from 1590, I see. 28 So we'll mark this as an exhibit, if I may. 29 THE REGISTRAR: Exhibit 1599. 30 31 EXHIBIT 1599: British Columbia Aquaculture 32 Regulatory Regime, Public Reporting of 33 Regulatory Information, Under the British 34 Columbia Aquaculture Regulatory Regime 35 (DRAFT) June 29, 2011 36 37 MR. TAYLOR: 38 And Tab 19, is that a similar document but on 39 licensing approach? 40 MR. THOMSON: Yes, it is. MR. TAYLOR: Next exhibit, please. 41 42 THE REGISTRAR: Exhibit 1600. 43 44 EXHIBIT 1600: British Columbia Aquaculture 45 Regulatory Regime, Aquaculture Licensing 46 Approach (DRAFT), June 29, 2011 47

MR. TAYLOR: 1 Tab 20, same sort of document, but on 3 environmental impacts -- we'll have to wait a 4 moment for it. 5 MR. THOMSON: Yes. it is. 6 MR. TAYLOR: Thank you. May that be the next exhibit, 7 please. 8 THE REGISTRAR: Exhibit 1601. 9 10 EXHIBIT 1601: British Columbia Aquaculture 11 Regulatory Regime, Identification and 12 Management of Environmental Impacts of, Under 13 the British Columbia Aquaculture Regulatory 14 Regime (DRAFT), June 29, 2011 15 16 MR. TAYLOR: 17 And just finally in this little group, Tab 22 of 18 Canada's book, please. 19 MR. THOMSON: Yes, it is, it's a description of the 20 approach to aquaculture management from an 21 ecosystem-basis. 22 MR. TAYLOR: And may that be the next exhibit, please. 23 THE REGISTRAR: Exhibit 1602. 24 25 EXHIBIT 1602: Pacific Aquaculture 26 Regulations, Ecosystem-Based Approach to 27 Aquaculture Management (DRAFT) 28 29 MR. TAYLOR: 30 Now, I have in the book that I want to turn to, 31 firstly Tab 23, a series of documents which are 32 entitled "Approach to", and they're on different 33 topics. Tab 23 itself is on "Feed-Related Organic 34 Deposition". As I understand it, a series of 35 documents were prepared on "Approach to" by 36 Fisheries on various topics, and this is one 37 example; is that right? MR. THOMSON: Yes. 38 39 And approximately what date would these have been created, do you know? 40 41 MR. THOMSON: They've been created over the late spring 42 and summer of 2011. 43 All right. 44 MR. THOMSON: And they are approaches as a precursor, 45

if you will, to a policy development, or to a

MR. TAYLOR: All right, thank you. I'm going to ask

policy.

that this be marked as the next exhibit, please, Tab 23.

THE REGISTRAR: Exhibit 1603.

EXHIBIT 1603: Pacific Aquaculture Regulations, Approach to Managing Feed-Related Organic Deposition in Aquaculture (DRAFT), 2011

### MR. TAYLOR:

- And there's a series of them at Tabs 24 through 29, and Tab 31 of Canada's book. I'm wanting to have them marked as an exhibit. Notice has been given, and in the interests of time, I'm going to propose that they might just be marked without taking the time to go through each one, if I can do that, unless Mr. Martland or anyone else objects.
- MR. MARTLAND: No, that's a sensible use of time unless there's a concern. I think one of the tabs, number 26, may not be an "Approach to" document. But that observation aside, unless other counsel have an issue, perhaps the easier way to do that would be to -- I don't know if Mr. Taylor wished to do the numbering now or whether we could indeed do that over the midday break and assign the numbers on the record at that point quickly.
- MR. TAYLOR: I'm happy to do it on the break, and I can also advise that Tab 27 is Exhibit 1576, and I will go to Tab 26 then separately. So I'll deal with over the break, 24, 25, 27 is an exhibit, 28, 29, 31.
- We'll go to 26 right now, if we may. That may not be an "Approach to" document, but, Mr. Thomson, I'll let you say what it is.
- MR. THOMSON: It's some guidance that was developed at the national level for development of the Integrated Management of Aquaculture Plans.
- MR. TAYLOR: Okay. I'll ask that that be the next exhibit, then, please.

THE REGISTRAR: Exhibit 1604.

EXHIBIT 1604: Pacific Aquaculture Regulations, Integrated Management of Aquaculture Plans (IMAP) Guidance (DRAFT)

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MR. TAYLOR:

Tab 30, please. Mr. Swerdfager or Mr. Thomson, 3 what is this? MR. THOMSON: It's a policy document for discussing the 5 current access to wild resources as it applies to 6 Aquaculture Policy which is in play, for a 7 potential review and changes as we review that 8 current policy. 9 MR. TAYLOR: All right, thank you. May that be the 10 next exhibit, please. 11 THE REGISTRAR: Exhibit 1605. 12 13 EXHIBIT 1605: Department of Fisheries and 14 Oceans, Policy on the Access to Wild Aquatic 15 Resources as it applies to Aquaculture, 16 Discussion Document (DRAFT), March 9, 2011 17 18 MR. TAYLOR: 19 And then Tabs 45 and 46, either together on the 20 screen, or separately, whatever works easily, they 21 are documents to do with sea lice. Do you 22 recognize that document, Mr. Thomson? 23 MR. THOMSON: Yes. 24 And that's what it says, it is? It's a DFO 25 document on managing sea lice? 26 MR. THOMSON: Yes. 27 MR. TAYLOR: May that be the next exhibit, please. 28 then --29 THE REGISTRAR: That was number which, Tab which? 30 MR. TAYLOR: Tab 45. 31 THE REGISTRAR: Tab 45, 1606. 32 33 EXHIBIT 1606: Management of Sea Lice in B.C., 34 [DFO] 35 36 MR. TAYLOR: Thank you. Sorry, Mr. Giles. 37 Tab 46, can you just explain very quickly what 38 that is, Mr. Thomson? 39 MR. THOMSON: It's a graph produced showing the amount 40 of in-feed treatment applied in the B.C. 41 aquaculture industry from 1996 to 2010. The in-42 feed treatment being that for reducing the numbers 43 of sea lice on farmed salmon. 44 Is that part of what goes on the website? 45 MR. THOMSON: This particular graph is on our website, 46 yes. 47 MR. TAYLOR: And then if you turn, please, to Tab 9,

and then we'll go to Tab 10 after that.

THE REGISTRAR: Did you wish to mark Tab 46 first?

MR. TAYLOR: Oh, I'm sorry, yes, thank you, Mr. Giles.

THE REGISTRAR: Exhibit 1607.

EXHIBIT 1607: Excel graph showing Use of In-Feed Sea Lice Therapeutants in British Columbia (1996-2010)

- MR. TAYLOR: As we go there, I'm probably about two minutes out, Mr. Prowse has said that he will give me a few minutes of his time, so if you want to just make a note of what I somehow owe him, I'd be indebted.
- Q Tab 9. Now, this is a document that relates to something called PARR, is it, either Mr. --
- MR. SWERDFAGER: That's correct.
- Q And what is PARR?
- MR. SWERDFAGER: As it says at the top, it's the Program for Aquaculture Regulatory Research, and it's a component of the Department's Sustainable Aquaculture Program established in 2008.
- MR. TAYLOR: All right. And I think in the interests of time we'll have to let the document speak for itself. But if that could be marked as the next exhibit, please.

THE REGISTRAR: Exhibit 1608.

EXHIBIT 1608: Program for Aquaculture Regulatory Research (PARR), Call for Proposals (2009/10)

## MR. TAYLOR:

- Q And if we turn to Tab 10, there's a two-page document, called "Directed Call for Proposals". Can you just explain what that's about, what this is, Mr. Swerdfager?
- MR. SWERDFAGER: This is a program component that's administered by the Science sector, and it is for administering PARR. Essentially what it does is it puts out a call for proposals to departmental scientists based on a set of priorities that are developed in tandem by Aquaculture Management Directorate that I used to head, and the Science sector, and it is how we allocate funding under the PARR I was going to say PARR program, but that's double-counting "program" under the

1 program. 2 All right, thank you. Mr. Last, I have a question 3 of you. Can you describe how you would 4 characterize the working relationship between the 5 Province and Canada regarding aquaculture? 6 MR. LAST: It's been in one word cooperative, firmly 7 committed to a smooth transition to federal 8 regulation of aquaculture from the province. 9 All right, thank you. And that relationship will 10 be an ongoing one, I take it? 11 MR. LAST: Yes. Dr. Fleming, do I understand correctly that your 12 13 knowledge is focused on Atlantic salmon in the 14 Atlantic? 15 DR. FLEMING: That's correct. 16 Thank you. DR. FLEMING: Though I have worked in the Pacific. 17 18 During your doctorate work? 19 DR. FLEMING: Yes, and my Masters. 20 And that would be up to about 1991, is it? 21 DR. FLEMING: That's correct. 22 So some time ago. 23 DR. FLEMING: And as well as I was in Oregon for --24 from 2001 to 2004. 25 Yes. You were an adjunct professor down there, I 26 believe? 27 DR. FLEMING: No, I was an associate professor 28 (indiscernible - overlapping speakers). 29 All right. Thank you for that correction. 30 Swerdfager, you indicated earlier that you have 31 some knowledge of regulatory regimes in other 32 countries around the world. You didn't mention 33 Norway. Do you have knowledge of what's done in 34 Norway? 35 MR. SWERDFAGER: I've been to Norway twice and met with 36 my counterparts at some length. We also as a 37 Department have a bilateral memorandum of 38 understanding with Norway. We meet face-to-face 39 once a year and by conference call every off six 40 months, so to speak. And we had a -- have, 41 rather. an informal committee of heads of 42 aquaculture management organizations in 43 government. So my counterpart over there, Magnor 44 Nerheim and I used to meet face-to-face fairly 45 regularly and by phone quite frequently. So I'm

very familiar with how they set things up and run

them.

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Do you have anything to say quite briefly in response or further to what Dr. Fleming was saying earlier in answer to Mr. Martland's questions?

MR. SWERDFAGER: I think he characterized the structure of the government accurately, and I think that the point that I would have added is that when he was enumerating some of the variety of departments that are involved in aquaculture management, there are some parallels, of course, to Canada. Aquaculture is not managed at the federal level exclusively by DFO. Obviously we are engaged with our counterparts in Environment Canada and other Departments, just as they are in Norway.

Norway is somewhat different, though, and of course in the sense that they are not a federal -or a federation, sorry, so they don't have the equivalent of the federal/provincial dynamic and interaction. They run a much more centralized system. Their enforcement powers, therefore, are a little bit different. But much of the structure of the regulatory program is familiar to us. We've spent some time on it. And they're also very active in the International Standards Organization. We've worked with them very closely there in terms of technical requirements for net pen strength and design and a number of other, what I would describe as very operational detailed factors.

- MR. TAYLOR: All right, thank you. Those are may questions, and Mr. Martland may let me know how much I owe Mr. Prowse at some point.
- MR. MARTLAND: Yes, I'll do the math soon. I wonder just by way of guickly dealing with these documents, so I'm not using his time allocation, the one on screen, number 10 from Canada's list, I don't believe that was marked. Perhaps we can do that.

THE REGISTRAR: Exhibit 1609, yes, 1609.

> EXHIBIT 1609: Program for Aquaculture Regulatory Research (PARR), Directed Call for Proposals (2010-2011), PARR research priorities, science objectives and funding allocation for the 2010-2011 funding cycle

MR. MARTLAND: What I'm going to propose, Mr. Lunn and Mr. Giles, and I'll pass you a note with these

1 2 3 4	THE	numbers. But I wonder if I can propose that Canada's number 24 become 1610; Canada's 25 become 1611; Canada's 18 become 1612.  REGISTRAR: So marked.
5 6 7 8 9		EXHIBIT 1610: Pacific Aquaculture Regulations, Approach to Managing Non Feed- Related Organic Deposition in Aquaculture (DRAFT)
11 12 13		EXHIBIT 1611: Pacific Aquaculture Regulations, Approach to Fish Health (DRAFT)
14 15 16 17		EXHIBIT 1612: Pacific Aquaculture Regulations, Approach on the Use of Noise (DRAFT)
17 18 19 20 21 22 23 24 25		MARTLAND: Canada's 29 become 1613. REGISTRAR: So marked.
		EXHIBIT 1613: Pacific Aquaculture Regulations, Approach to Managing Fish Transfer, Removal and Production in Aquaculture Facilities (DRAFT)
26 27 28		MARTLAND: Canada's 31 become 1614. REGISTRAR: So marked.
29 30 31 32		EXHIBIT 1614: Pacific Aquaculture Regulations, Approach to Chemicals and Litter Management of Aquaculture Sites (DRAFT)
33 34 35 36 37		MARTLAND: And that I be given a prize for the most documents entered in a minute.  I'm going to give now Mr. Prowse up to 30 minutes, or indeed under 30 minutes, given the shuffling of time, please.
38 39 40	THE	COMMISSIONER: Mr. Martland, can I just ask you, in Tab 26, which I think was already marked as an exhibit, if I'm not mistaken.
41 42 43 44 45 46 47		MARTLAND: Yes, it was.  COMMISSIONER: 1604, correct. On page 2 of that document, perhaps Mr. Taylor is the one who could address this. In the bullet at the top of the page it refers to:
4 /		<ul> <li>The incorporation of the federal policy</li> </ul>

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PANEL NO. 58
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approach for aquaculture, in particular the 1 2 precautionary approach and ecosystem approach 3 to management in aquaculture decision-making; 4 5 Are any of these exhibits that have been marked, 6 Mr. Taylor or Mr. Martland, those documents? 7 other words, are there specific documents that 8 relate to that? 9 MR. TAYLOR: Well, I'll defer to Mr. Swerdfager or Mr. 10 Thomson, I think, to answer that. 11 THE COMMISSIONER: Thank you. 12 MR. THOMSON: I believe there was a document marked for 13 exhibit as the Ecosystem Approach to Management 14 for Aquaculture. 15 THE COMMISSIONER: All right. So you think there is an actual document that's been marked? 16 17 MR. THOMSON: Yes. 18 THE COMMISSIONER: Well, perhaps over the break, Mr. 19 Martland or Mr. Taylor, you can put your heads --20 I just wanted to know whether there were documents 21 marked that refer specifically to those items. 22 MR. MARTLAND: Thank you, we'll --23 1601, I'm being told is what the MR. TAYLOR: 24 Commissioner may be referring to. 25 MR. THOMSON: Yes, that's the one on the screen. 26 MR. LUNN: I have 1602 on the screen now, I believe. 27 MR. TAYLOR: I might have the document number wrong, 28 but this is the document that you're thinking of, 29 is it, Mr. Thomson, in answer to the 30 Commissioner's question? 31 MR. THOMSON: Yes, it is. 32 THE COMMISSIONER: That's Tab 22 then, okay, thank you. 33 And if you discover another one, you could let me 34 know after the break. 35 MR. TAYLOR: All right, thank you. 36 Thank you very much. THE COMMISSIONER: Thank you. 37 MR. THOMSON: 38 THE COMMISSIONER: Sorry, Mr. Prowse. 39 MR. PROWSE: Thank you, Mr. Commissioner. Mr. 40 Commissioner, D.C. Prowse appearing for the 41 Province of British Columbia. And, Mr. Lunn, I 42 think I will be referring to the provincial tabs 43 that were I think sent by email on August 23rd, 44 2001. 45

## CROSS-EXAMINATION BY MR. PROWSE:

- Q So, Mr. Last, can you explain to the Commissioner your role with respect to particularly the recommendations of the Review Committee that reported in 1997. So you joined the Province, I think, in 2000, and what was your general role at first as a legislative analyst?
- MR. LAST: My first role when I began working for the Province was in the development of the escape regulations and the standards of practice for escape prevention.
- Q All right. And then after 2003 what was your general role, really to date?
- MR. LAST: That generally looking at implementing the recommendations of the Salmon Aquaculture Review with respect to the broad categories of siting, waste management, escape prevention, and fish health.
- Q All right. And I'd like -- there's a committee called the Directors' Aquaculture Committee that I think has been around for some time and is still continuing. Can you tell the Commissioner what that committee is and does?
- MR. LAST: It was implemented, as you say, quite some time ago, and its function has evolved, but it over the years has been primarily an opportunity for communication between provincial —— all provincial agencies with an interest in aquaculture and federal agencies, as well. More recently it has been somewhat restructured to align with the new regulatory framework and report directly to the Canada-British Columbia Aquaculture Management Committee that was established by the agreement signed between the two governments in December 2010.
- Q And you were asked about your working relationship with DFO, and particularly with Mr. Thomson. I gather the two of you have a long history of working together?
- MR. LAST: Yes, we've been working together pretty much ever since I started in government.
- Q And how would you describe your working relationship with him?
- MR. LAST: Good, cooperative, and we have similar goals in mind in respect to the serving -- serving the public interest efficiently and working together

as we have to in this area that requires provincial and federal governance.

All right. Mr. Lunn, could we have Tab 4 from the Province's list, please. So the Salmon Aquaculture Review preceded your arrival in government, and I gather it was a five-volume report that covered a whole host of things with respect to a moratorium that had -- on new sites that had been imposed in 1995; is that right?

MR. LAST: Yes.

- Q All right. And this document shows the date of March of 2006. I gather that you are one of the hands that was involved in the preparation of this document.
- MR. LAST: Yes.
- Q And that it was used for different purposes as from time to time.
- MR. LAST: It was updated, it evolved, it was intended to gather the -- to reflect the work that was being done to implement the Review's recommendations.
- Q All right. So I'm going to take you to some of these and get you to either talk to them or sometimes just summarize them and I'll lead on some of these.

So recommendation 1 is on the topic of "Farm Siting", and it was to do with establishing a Fish Farm Review Committee, and the response indicates in particular that there was some work done between 2000 and 2003 in that there was a Project Review Team that was created in 2003. Can you explain the function of the Project Review Team and your understanding of how it worked?

MR. LAST: Yes, I can. I'll back up a little bit and say that the nub of the recommendation was for a number of regional committees established around the province that we didn't feel that was — it wasn't warranted, it wasn't efficient to have these standing permanent committees, in view of the low numbers of applications, the low amount of work that would be required, and instead decided that a single committee was more appropriate.

The Fish Farm Review Committee was established for that purpose in 2000.

That was replaced in 2003 by a body called the Project Review Team, the PRT, that performed kind of a -- it was an initial assessment, initial

- screening of the completeness of an application, so that to ensure that all the information that was needed in order to make a decision was available before proceeding.

  There is a reference to a number of different
  - Q There is a reference to a number of different ministries and DFO in this recommendation, and, Mr. Lunn, I believe in the PPR at page 28 of the PPR there's a chart that would be useful to refer to here. So, Mr. Last, can you just briefly refer to the different entities here.
  - MR. LAST: Yes, this goes back to, as it says at the bottom, 2004-2005, but it represents the broad divisions between the parts of the provincial government that dealt with different areas on the right-hand side under the Ministry of Environment, this -- they dealt with fish -- fish waste, the fish waste regulations. Next to that we have ILMB, dealt with Crown land tenuring. Then under MAL, which is now Agriculture, we have the broad groupings of fish health under, then, Ron Lewis, the Director of Animal Health. In the middle, Al Castledine and Aquaculture Development is the Policy function, and then on the left, Licensing & Compliance, separated by that dotted line.
  - Q And the question was asked at the outset about conflicts, and can you say something about the extent to which this shows some firewalls that were to address those kinds of tensions?
  - MR. LAST: Yes. The dotted line is representative of that, keeping the development function separate in the organizational structure from the licensing and compliance function.
  - MR. PROWSE: All right. Mr. Commissioner, could we mark the table document as the next exhibit. THE REGISTRAR: Exhibit 1615.

EXHIBIT 1615: Province of British Columbia actions to meet the intent of the Salmon Aquaculture Review's Recommendations (03/2006)

## MR. PROWSE:

 Q And so this can be actions to meet the intent of the Salmon Aquaculture Review's Recommendations of 03/2006 as a title. So moving on to point 2 of this on "Farm Siting", Mr. Last, can you very briefly just refer to the Coastal Zone concepts

1 that are there, just in a sentence or two. MR. LAST: The Review recommended that the Province 3 pursue development of these Integrated Coastal 4 Zone Management Plans, and Land and Resource 5 Management Plans, and the Province pursued 6 developing -- development of a number of these 7 plans, and that they were to varying degrees, 8 depending on where they were focused, completed. 9 We have LRMPs with -- that have a coastal 10 component in the Central Coast, and there was a 11 Kalum Plan, as well on farther north. At a more 12 local level there was a North Island Straits 13 Coastal Plan, Kyuquot, and in other areas, Baynes 14 Sound and Cortez Island for shellfish aquaculture. 15 But it's fair to say that the use of these --16 coastal planning is not the same as what's been 17 referred to or referenced to in Norway, 18 particularly when it comes to aquaculture? 19 MR. LAST: I think they are different, different 20 approaches, and I think Dr. Fleming is more of an 21 expert in that area, but my understanding is that 22 they are somewhat different approaches. 23 Sticking with farm siting, I'm going to lead up to Q 24 item 8, but starting with item 4. So the 25 recommendation was to: 26 27 28 29

Adopt revised salmon farm siting criteria.

And can you just speak to item 4.

- MR. LAST: Yes. Following the recommendation, the province reviewed its existing -- I understand, I wasn't -- I wasn't directly involved, but as I said, I gathered the information for this table. But reviewed the existing siting farm criteria or quidelines and adopted the guidelines that were in place at the time of the transition to federal regulation.
- And so item 5 again follows up on the recommendation as to how this was applied. moving then to item 8, it says one of the recommendations was to:

Assess existing salmon farms to determine if the farms are causing significant negative impacts that need to be corrected.

So can you spend a little time on the response to

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1 item 8, how that -- what happened as you understand it? 3 MR. LAST: Yes, there was a process to review the existing, the farms that existed at that time 5 between 2000 and 2002, and look at environmental, 6 social and economic impacts that may -- may have 7 required the relocation of those farms. A list initially of ten farms was selected and then a 8 further 27 were added to that a few years later. 9 10 All right. And to your understanding, of those 37 11 farms, are there any active farms that are still 12 in the same location they were at in 1997? 13 MR. LAST: Of the --14 Doing the same things? 15 MR. LAST: Of the 37 farms there were in 2002 when the 16 moratorium was lifted, six of the farms that were 17 identified for economic reasons no longer needed 18 to be on the list because companies could apply 19 for new sites, so those were withdrawn. Two that 20 were initially dealt with as relocations, were re-21 put back into the review process as new farm 22 sites. Nine were completed, the transfers from 23 the initial sites to the proposed new locations 24 were completed. And the rest of them have been --25 their operational strategy, their management --26 their purpose has been adjusted to suit the 27 location. So they're no longer doing the same 28 thing that they were doing at the time they were 29 identified as being not sited as well as they 30 could be. 31 So your understanding is that all 37 in fact have 32 been dealt with one way or another? Addressed, yes. 33 MR. LAST: And reference has already been made to the 34 35 importance of **CEAA** screening and siting, and so I 36 won't ask you about that.

The topic of escapes is referenced at item 12 of Exhibit 1685 (sic). Can you just say what your role was with respect to escapes, just summarize it very briefly?

MR. LAST: The -- it was, pursuing the recommendations of the report, the -- we looked at, we did an analysis of the information that was available, and determined that the primary cause for escapes was human error. And the best approach to addressing the issue was to prevent escapes, which we chose to do through regulation and through

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development of standards of practice for the prevention of escapes, which included net standards, net strength testing, protocols for that, recordkeeping around nets, strict reporting requirements, maintenance or development of maintenance of best practices plans around escape prevention.

All right. And moving on to item number 24, again

 very briefly can you explain the importance of the -- well, the recommendation was to:

Develop a regulation under the **Waste Management Act** that implements a Performance-Based Waste Management Model.

And was that done?

- Performance-based Finfish MR. LAST: Yes, it was. Aquaculture Waste Control Regulation came into effect in 2002, and this is based on a system that requires registration of the site with a baseline sampling of what exists or existed under the site prior to fish being introduced, and then setting a -- using a performance-based approach, setting a standard. A threshold for sulphides was the indicator that was preferred as a surrogate for diversity. And that performance-based standard was something that was monitoring was used to ensure that the impact under a particular farm was held or kept below that threshold. If it was exceeded, there were requirements for addressing that to bring the -- bring the farm back into compliance. And this was all around the -- built around the growth cycle at the salmon farm.
  - Q All right. And again, a significant effort by a number of different provincial government ministries working with the Department of Fisheries and others to achieve these --
  - MR. LAST: Primarily Ministry of Environment, they were the lead on the development of that regulation, but, yes, there was quite a bit of cooperation.
  - Q Skipping ahead to item 43, Mr. Lunn, this shows that the concept of closed marine -- closed containment, or they call it closed marine systems, went back -- was one of the SAR recommendations. And the answer, as I understand it, Mr. Last, shows early closed containment work that was done by the province, or with the input

from the province?

- MR. LAST: Yes. We supported several pilot projects that explored the use of a closed-bag system, for example, was one of the projects that was set up in the marine. There was a land-based system, so there were a number of projects supported by the province to explore the potential of closed systems.
- Q And, Mr. Lunn, if you could bring up provincial Tab 8 -- I can see I'm running out of time here. So just on the closed-containment, this is a document that you did with respect to closed-containment, in particular addressing that policy work done following the Special Legislative Committee and the Pacific Salmon Forum?
- MR. LAST: It's a more recent summary, picking up on the work the province has done to support the review of closed-containment aquaculture. There's a -- the list of the timeline of the development of some of this work including the federal CSAS review that the province provided some support for, for the technical review, and a number of others. But that work -- the province's work in that regard is ongoing. We continue to provide small, a little financial assistance, and but mostly supporting in with expertise and in kind contributions.
- Thank you. And item 44 is speaking to financial items, again there's been some provincial contributions over the years that are referred to. Can you speak to that?
- MR. LAST: Yes, most significantly the development of the Aquaculture and Environment Fund. It was a large sum of money directed towards research into aquaculture and environment interactions.
- MR. PROWSE: Yes. If I could mark -- Mr. Lunn, I'm sorry, I forgot to mark Tab 8 as an exhibit -- or, sorry, Tab 8 as an exhibit.

THE REGISTRAR: Exhibit 1616.

EXHIBIT 1616: Summary on Closed-Containment Aquaculture Activities in BC, December 2010

MR. PROWSE: And Tab 9, Mr. Lunn. And so the -- I'm going to have to -- I think there may be time disputes here, but I'm told my time was running out rapidly.

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PANEL NO. 58
Cross-exam by Mr. Prowse (BCPROV)

Q So this is again to bring this up to date on response to the Special Legislative Committee on Sustainable Aquaculture, which we'll have to explain another time. Is that -- so that document, did you participate in this document and it's accurate, is it?

MR. LAST: Yes.

MR. PROWSE: All right. If that can be the next exhibit.

THE REGISTRAR: Exhibit 1617.

EXHIBIT 1617: Special Legislative Committee on Sustainable Aquaculture

MR. PROWSE:

Q And if I can go to Tabs -- I'd like to mark as exhibits provincial Tabs 2, 3, 6 and 1 as the next four exhibits. And so if we can do that over the noon hour. At Tab 2, Mr. Lunn, if you can bring that up. So there was a commission or a report done for the Salmon Forum by a Mr. Porter. Tab 2 in the middle, there's a sentence saying:

We would have preferred to see an audit that focused on outcomes and not simply on whether or not a specific action was prescribed in regulation.

What's the point here in terms of performancebased approaches to regulation?

- MR. LAST: This audit that was prepared for the Pacific Salmon Forum by Mr. Gareth Porter applied an approach that he had used previously in Atlantic salmon farming jurisdictions to rate government regulatory frameworks for the protection of the wild salmon in those jurisdictions. We felt strongly that Mr. Porter had not considered that the performance-based approached that B.C. had used in developing some of our regulations, rather than a prescriptive-based approach, had not been considered adequately in his analysis, and suggested that it was -- that it would have benefited from that.
- Q All right. And Tab 3 was an email you sent on February 17th, 2006 which was sent by you to Mr. Porter?
- MR. LAST: That's true.

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And it talked about doing a follow-up, and that if
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            you turn to Tab 6, Mr. Lunn, that's the
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            Comprehensive MAL Response to BC Audit and that's
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            found at Tab 6. And you, amongst others, there
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            was wide participation in doing this comprehensive
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            response to Mr. Porter?
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       MR. LAST:
                 That's right. I was -- I coordinated the
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            gathering of this information, the packaging it
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            into a single report.
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            I think I'm getting the hook, Mr. Commissioner, so
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            those are my questions.
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      MR. MARTLAND: And I wonder if the last two ought to be
            marked as exhibits, I don't know that they were,
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            the last three.
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       THE REGISTRAR: He spoke about four, he spoke about Tab
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            2, 3, 6 and 1.
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      MR. PROWSE: Yes, I did.
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       THE REGISTRAR: Which ones would you like marked?
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      MR. PROWSE: Yes, please.
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       MR. MARTLAND: I don't know if he went to number 1.
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       THE REGISTRAR: I'm sorry?
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      MR. PROWSE:
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            Mr. Lunn, can you bring up Tab 1 and turn to the
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            signature page. Mr. Thomson, did you sign that?
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      MR. THOMSON: Yes, I did.
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                   Those are my questions, Mr. Commissioner.
      MR. PROWSE:
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       THE REGISTRAR: Okay. Now do you want to mark those in
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            sequence?
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      MR. PROWSE:
                   In the sequence that I gave, yes, please.
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       THE REGISTRAR: Tab 2 will be marked 1618; Tab 3 will
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            be 1619; Tab 6, 1620; Tab 1, 1621.
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                 EXHIBIT 1618: Letter from Al Castledine,
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                 Jaclynn Hunter and Dr. Joanne Constantine to
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                 Pam Parker Re: Ministry of Agriculture and
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                 Lands Response to "An Audit of the Management
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                 of Salmon Aquaculture for the Protection of
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                 Wild Salmon in British Columbia" By Gareth
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                 Porter, July 31, 2006
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                 EXHIBIT 1619: Email from Gavin Last to
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                 Gareth Porter Subject: Comments on draft
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report, February 17, 2006

BC Audit, April 5, 2006

EXHIBIT 1620: Comprehensive MAL Response to

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EXHIBIT 1621: Letter from Andrew Thomson to Pamela Parker, Subject: Fisheries and Oceans Canada Response to "An Audit of the Management of Salmon Aquaculture for the Protection of Wild Salmon in British Columbia" by Gareth Porter

- MR. MARTLAND: Mr. Commissioner, Mr. Blair for the Salmon Farmers Association is the next counsel. His allocation is 20 minutes. I simply raise as a question whether if we were to sit a few minutes late he would complete, otherwise if we broke at the normal time I suppose he'd be resuming. Thank you.
- THE COMMISSIONER: We'll break at the normal time, Mr. Blair.
- MR. BLAIR: Thank you, Mr. Commissioner. For the record, Alan Blair appearing on behalf of the B.C. Salmon Farmers Association.

### CROSS-EXAMINATION BY MR. BLAIR:

Q Gentlemen of the panel, we all are under time constraints. I'm going to start with a couple of big picture questions about the relationship between the industry and its regulators, federal and provincial. My first series of questions are probably directed best toward Mr. Thomson and Mr. Last, and again these are high level, they're probably yes or no answers. We'll get more detailed ones a little bit later in my time.

I think it's fair to characterize the industry relationship with regulators in this way, and I'll ask for your agreement or comment. Industry collects information for site applications according to the protocols established by the regulators using best available — a best available science approach.

MR. THOMSON: Yes.

MR. LAST: Yes, I would agree.

- Q Siting guidelines were developed by regulators using best available science or following a precautionary approach where gaps existed in science.
- 45 MR. THOMSON: Yes.
- 46 MR. LAST: Yes.
  - Q Industry works with these siting guidelines all of

the time, and therefore tends to apply for sites 1 that have a higher probability of being approved. 3 And what I'm getting at there is there's a high cost associated with each application, and is it 5 your experience that you don't find very many 6 applications from an industry on a site which is 7 destined to fail the siting guidelines. 8 question really is there likely a higher 9 probability of being approved because they work 10 with the guidelines all the time and the higher 11 cost associated with that? 12

MR. LAST: Yes.

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MR. THOMSON: Yes.

- Regulators conduct extensive reviews, and this includes public consultation following a risk management approach that considers Pathways of Effects?
- MR. THOMSON: Yes.
- Residual effects of -- and I'm hoping the recorder's getting the yeses. Thank you. Residual effects --
- MR. LAST: I'd have to say that the Pathways of Effects exercise that I've been involved in was led by the federal government. We participated, but it was primarily a federal government exercise.
- Thank you, Mr. Last, for that clarification. Residual effects of specific aquacultural activities, aquacultural activities are scored, taking into account industry mitigations such as siting, fish health management programs, and the final scoring outcome dictates the final acceptance of the project, or requires revision, redesign of the project.
- MR. THOMSON: Under the Environmental Assessment Screening projects, we determined whether or not there was a significant environmental effect after all factors were considered, mitigation included, and then we would determine whether there was mitigation effect from that.
- Largely in agreement, Mr. Last?
- MR. LAST: The process that a decision-maker uses to come to a conclusion, turning their mind to all of the relevant information, I don't know if I'd say that it comes down to a scoring system.
- Okay.
- MR. LAST: But their role is to look at all of the relevant information in making a decision.

Q Thank you. Active sites are monitored both by industry and the regulators as required by regulation to ensure that the performance standards are being met and established measures of mitigation -- and to establish and to determine whether the established measures of mitigation are being effective.

MR. THOMSON: Yes.

MR. LAST: Yes.

- Mr. Lunn, could we have Commission counsel Tab 23. If we could go to PDF, which I also understand is page 5. And counsel will correct me if we've already seen this. This looks quite similar to a document we've seen earlier, but I think it's new today. I hear no corrections. I'm going to suggest to you, Mr. Thomson, this is a March 2010, basically a siting, a farm siting requirement list, and if you need to go to the front page, we can do that. But does March 2010 sound about right to you, Mr. Thomson?
- MR. THOMSON: Yes, it's part of a document that was developed in March 2010.
- Q Thank you. And it lists a number of requirements to be met.
- MR. THOMSON: Sorry, March 2011 would be more accurate. 0 2011?
- MR. THOMSON: Yes.
  - MR. BLAIR: Thank you. Could this be marked as the next exhibit, please.
  - MR. MARTLAND: I think it's already Exhibit 1589.
- MR. BLAIR: Oh, I'm sorry. Thank you.
  - THE REGISTRAR: That will be --
  - MR. BLAIR: No, I think I'm being told it's already been marked.
  - THE REGISTRAR: Oh, it's already marked.
- MR. BLAIR: Thank you.
  - Q Then, Mr. Lunn, could we go to B.C. Salmon Farmers Tab 1, please. Just while we see that face sheet, and these questions are for you, Mr. Last. This document you can flip the page, sir, Mr. Lunn it refers to a guideline, and I believe the date on it is May 2003. Do you see that?
- MR. LAST: Yes.
  - Q Now, I'm told that this is a good outline of the process that's been followed in the relationship between the industry and the province in terms of siting and licensing. It's a 2003 document, and

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I'm told that it's the -- it's a good template of 1 the process that's been followed, but there has 3 been some updating of some of the requirements to 4 meet more site-specific applications and to be 5 adaptive in that regard. Do you agree? 6 MR. LAST: Yes, that's correct. 7 MR. BLAIR: Thank you. Could this be marked as the 8 next exhibit. 9 THE REGISTRAR: Exhibit 1622. 10 11 EXHIBIT 1622: Guide to Information 12 Requirements for Marine Finfish Aquaculture 13 Applications, British Columbia, May 2003 14 15 MR. BLAIR: 16 B.C. Salmon Farmers Tab 3, please, PDF 37 after we 17 see the face sheet just for a moment. This is 18 from the Pacific Salmon Forum and if we could go 19 to PDF 37. If you could enlarge the paragraph 20 below the graph, please, Mr. Lunn. 21 questions are for you, Mr. Thomson and/or Mr. 22 Take a moment to read that particular 23 paragraph that commences: 24 25 Today, all site application must undergo 26 detailed biological and environmental reviews 27 in accordance with both provincial and 2.8 federal regulations. 29 30 Do you see that? 31 MR. THOMSON: Yes. 32 33 These reviews require a significant 34 investment of time, money and expertise. 35 36 Do you both agree with that statement? 37 MR. THOMSON: Yes. MR. LAST: 38 Yes. 39 MR. BLAIR: Could that be marked as the next exhibit. 40 THE REGISTRAR: Exhibit 1623. 41 42 EXHIBIT 1623: BC Pacific Salmon Forum Final 43 Report & Recommendations to the Government of 44 British Columbia, January 2009 45 46 MR. BLAIR: 47 B.C. Tab 16, please. Mr. Thomson and Mr. Last,

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again in particular, you're familiar with this Practitioners Guide?

- MR. THOMSON: I've seen it, but I'm not familiar with it.
- MR. LAST: I wouldn't say I was familiar with it.
- Q Neither -- I'm sorry, neither of you are familiar with it?
- MR. LAST: I've seen it, but I haven't...
- Q All right. I'm going to direct your attention, then, to PDF 4, please, Mr. Lunn. And the second paragraph under the word "Preface", starting "The Risk Management Framework". The document says:

The Risk Management Framework is a structured approach to decision-making using a common set of tools. Some of these tools are new, such as the Pathways of Effects, and will require further refinement as they are tested and evaluated by Practitioners. Other elements, such as regional habitat classification schemes which identify fish and fish habitat sensitivities, have been in existence for some time in different regions of Canada.

Does that accord with your understanding of how the industry has moved forward in the last ten years or so in terms of siting and licensing?

- MR. THOMSON: It certainly is in agreement with how the Department applies its Habitat Management Program, yes, to aquaculture facilities, as well.
- MR. BLAIR: Could this document be marked the next exhibit, please.
- MR. LAST: And this is a federal document, specific to their processes, so I can't comment.
- MR. BLAIR: Thank you for that clarification. THE REGISTRAR: The document will be 1624.

EXHIBIT 1624: Practitioners Guide to the Risk Management Framework for DFO Habitat Management Staff, Version 1.0. Habitat Management Program, Fisheries and Oceans, Canada

MR. BLAIR:

Q B.C. Tab -- B.C. Salmon Farmers Tab 8, please. My question again for Mr. Thomson or Mr. Last. It

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really relates to how -- to explain how valued ecosystem components tables are used. I'm told that this particular document, as you can see on the face of it, is a **CEAA** Screening Report. It deals specifically with a Grieg Seafood BC Ltd. Proposed Finfish Aquaculture Facility at Concepcion Point in Nootka Sound, and I wonder if we could go, please, to PDF 17 and 18. Gentlemen, I'm referring you to - once Mr. Lunn decides whether he wants us to go for lunch or not - Table 1, please, Mr. Lunn. I think you had it, yes. Yes, thank you.

Firstly, Mr. Thomson or Mr. Last, are you familiar with this particular table and/or its use?

- MR. LAST: I'll let Mr. Thomson comment to this, again this is a federal document.
- MR. THOMSON: Yes, I am.

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- Q Can you very briefly describe the use of a Valued Eco Components.
- MR. THOMSON: Yes. So in the Canadian Environmental Assessment Act screening of a proposed activity, in this case an aquaculture facility, really the heart of the assessment is in the Valued Ecosystem Components table where you list the proposed activities, the potential environmental interaction of that activity, what is the potential ecosystem component that's going to be impacted, of the VEC that's going to be potentially impacted by that activity, and then you assess the -- or then you list the mitigation measures that are going to be implement by the operator of the company, in terms to avoid impact of those valued ecosystem components. And then a habitat practitioner or someone with expertise in it, assesses the significance of what the residual effect after the mitigation measures were applied is to the environment.
- MR. BLAIR: Could this be marked as the next exhibit, please. Mr. Commissioner, I have one question left, I'm in your hands.

THE REGISTRAR: That will be 1625.

EXHIBIT 1625: **CEAA** Screening Report, Grieg Seafood BC Ltd. Proposed Finfish Aquaculture Facility at Concepcion Point, Nootka Sound BC, DFO

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THE COMMISSIONER: We'll take the break, Mr. Blair.

MR. BLAIR: Thank you.

THE REGISTRAR: The hearing will now recess until two o'clock.

(PROCEEDINGS ADJOURNED FOR NOON RECESS)
(PROCEEDINGS RECONVENED)

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THE REGISTRAR: The hearing is now resumed.

THE COMMISSIONER: Mr. Blair?

MR. BLAIR: Thank you, Mr. Commissioner. Carrying on, I have some questions for Mr. Swerdfager regarding the Canadian Aquaculture Industry Alliance. And I wonder if, Mr. Lunn, you could put up B.C. Salmon Farmers' Tab 7?

CROSS-EXAMINATION BY MR. BLAIR, continuing:

The second paragraph in that text refers to, and this is a statement from the Canadian Aquaculture Industry Alliance. It says, in part:

The **Fisheries Act** is basically a wildlife management act and is not focused on the process of farming in the aquatic environment. Now more than ever before, aquaculture needs an act which recognizes that the process is a food production practice which takes place with fish as private property and occurs in legally defined private spaces. It is not the management of common property resource which occurs in public waters.

Sir, is it fair to say that you've heard that position being expressed by the industry generally, and by the Industry Alliance over time?
MR. SWERDFAGER: I have heard that expressed a number of times, yeah.

40 Q 

And this, I understand, and it's hard to tell from page 1, but when you look further down on the subsequent pages, it appears to be a July 2010 statement by that group. Does that accord with your understanding of when this document might have been produced?

MR. SWERDFAGER: If it says that's the date it was produced, I don't have any dispute with that, no.

MR. BLAIR: And I wonder if we could mark this as an exhibit, and then I'd like to take the witness to a series of email exchanges.

THE REGISTRAR: 1626. MR. BLAIR: Thank you.

EXHIBIT 1626: Document entitled, "An Aquaculture Act for Canadian Aquaculture (or separate Chapter in *Fisheries Act*)

MR. BLAIR: If we could go to B.C. Salmon Farmers' Tab 34, please?

- So Mr. Swerdfager, I have a three-page email string, and you'll see that you're either a receiver or a sender? And if we could look at the email that's on the screen -- if you could just move your cursor, thank you Mr. Lunn -- the one, April 17th, from yourself to a variety of parties, commenting generally about the options that could be presented to the DM, the Deputy Minister, for consideration as a new **Aquaculture Act**. Do you see that in the first line of your paragraph?
- MR. SWERDFAGER: I do, yeah.
- And so this accurately reflects your view in April of 2010 of some of the options that needed to be considered as the federal government moved into the new regime with the industry?
- MR. SWERDFAGER: Well, it's my view that some of those options should be presented to our Deputy Minister for consideration, for sure.
- MR. BLAIR: And just if you could go to the next page, Mr. Lunn?
- Q I want to direct you, sir, to the email, it's the same day, it's the nightshift, I think. It looks like the Saturday, April 17th, at 0600 hours. There we are. And the third paragraph down.
- MR. BLAIR: Just highlight that bottom paragraph, Mr. Lunn?
- Q And sir, this, again, is an email that you sent that day to a variety of parties following up on the -- in fact, I showed you the 11:54 version. This was written a few hours earlier, correct?
- MR. SWERDFAGER: The government never sleeps.
- Q I didn't intentionally give you that lead-in, but you got it. This paragraph, I'm going to read it into the record, and then I'm going to ask you to comment on it generally, if I may, sir?

MR. SWERDFAGER: Mm-hmm.

Q You said in this email:

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I feel that the **Fisheries Act** may not be an adequate mechanism for governing the aquaculture sector in Canada. Notwithstanding the fact that the B.C. Supreme Court ruled that aquaculture is a fishery, the Court was equally clear that it is a unique fishery and not necessarily akin to capture fisheries. Indeed, at a conceptual level, I would argue that there are real concerns with treating aquaculture as just a subset of capture fisheries to be managed using a statute designed for capture fisheries albeit modified in some way to address aquaculture. Just as no one now would equate agriculture with gathering and hunting wild plants and animals, it is likewise inappropriate to perpetuate the misconception that the domestic culturing of aquatic plants and animals is closely allied to the capturing of wild organisms. modernize the **Fisheries Act** while retaining its antiquated concept that aquaculture is just a subset or minor element of the fish and seafood sector would, in my view, be unfortunate.

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Does that reflect your view of the need to minimally modernize the **Fisheries Act** and perhaps be more bold and put forward a recommendation for an Aquaculture Act to address the unique features of the industry that you've highlighted in this paragraph?

MR. SWERDFAGER: Well, I think the way I've laid it out there certainly reflected my view then, and I think I would agree with most of what I've said in there now. I think that the only caveat I would put on that, of course, is that certainly, our job in the Department is to offer suggestions, recommendations, options, well, (a), to our Deputy Minister, but on up into the Minister, and that certainly would be a decision that the government would make as opposed to anything we would do.

I think that the key point here is that to some considerable degree, we're using, as I say,

here, a tool to manage an industry that was not built, and I'm talking about the Act now, as opposed to the Regulations, but was not built for that purpose. And as the industry continues to mature across the country, I think there may be a scope for us, at some point, if the government chose, to go in a particular direction towards modernizing the regime, certainly, to put something in place that's more explicitly addressing aquaculture is something they probably would want to think about. 

- And without speaking for where government might go in the future on a legislative initiative, you'd want it to be open, both to considering modernizing the *Fisheries Act*, and/or an option on the table, an Aquaculture Act in its own right?
- MR. SWERDFAGER: I think that it would be important for a number of options to be considered, and I would be the first to admit that my own views on this have waffled a little bit over the years. There are times I've thought that an Aquaculture Act is necessary, there are times that I thought that simply an amendment to add a part or a major section to the *Fisheries Act* would suffice. I think the key thing is that it would be ideal for options to be put before our government to select from as to how best Parliament may want to express itself with respect to aquaculture.
- Thank you for those views. As you probably know, the Commission is looking for recommendations and to the extent that you're able to give an indication of a personal view as opposed to a government or legislative agenda, we appreciate those views.
- MR. BLAIR: And those are my questions. Thank you. I think I have a credit of about three minutes that Mr. Martland might give me sometime in the future, October, I think.
- MR. MARTLAND: Well, we're hiding away all our credits. I'll talk later with Mr. Blair about that.
- MR. BLAIR: Thank you.

- MR. MARTLAND: I wonder if the document on screen, if it hasn't been marked, if it should be marked as an exhibit?
- MR. BLAIR: Thank you, Mr. Martland.
- 46 THE REGISTRAR: Tab 34 will be marked as 1627.
- 47 MR. BLAIR: Thank you. Those are my questions.

EXHIBIT 1627: Email from James Smith to Trevor Swerdfager dated April 19, 2010, re **Aquaculture Act** 

- MR. MARTLAND: Thank you. Mr. Commissioner, I have next counsel for the Aquaculture Coalition, 20 minutes. Thank you.
- MR. McDADE: Thank you, Mr. Martland. My name is Greg McDade, and I'm counsel for Dr. Morton and the Aquaculture Coalition.

Before I commence, Mr. Commissioner, I just want to put a statement on the record. I'd like to express our significant concern about the fact that we have such a short time period, 20 minutes. And I know you're under a great deal of pressure. I just believe that 20 minutes is completely inadequate to deal with this important issue and the many documents that are before us, but I'll do the best I can.

Dr. Fleming, you're the only person on this panel

THE COMMISSIONER: Thank you very much, Mr. McDade.

### CROSS-EXAMINATION BY MR. McDADE:

that is a non-governmental person and you've come the farthest so let me begin with you. And I'm very interested in your Norwegian experience. As I understand your evidence, in Norway, the government, in its wisdom, has seen fit to recognize that certain fishing rivers or migratory routes for fish are important enough that they should keep salmon farms off of them?

DR. FLEMING: That's correct.

 Q And so does that mean the government recognizes a risk to wild fish from fish farms?

DR. FLEMING: Yes, there are official statements to that fact.

 And one of those risks is the risk of disease transmission?

DR. FLEMING: Yes.

 Now, I understand, in Norway, the fish farm industry has significant problems with disease and has had, really, throughout its history; is that right?

DR. FLEMING: Yes. Well, there have been problems with disease throughout time, yes.

And it seems to be a new disease, or there's new

diseases emerging all of the time. There are currently a number that they're struggling with, aren't there?

DR. FLEMING: I probably couldn't comment on the degr

- DR. FLEMING: I probably couldn't comment on the degree to which there are new diseases, but yes, they are still tackling the existing diseases and disease epidemics.
- Q And Norway has rules, as we do, to force the fish farms to protect from disease?
- DR. FLEMING: Yes. Yeah, there are rules in place, veterinarian regulations with regards to transfer and reporting disease, et cetera.
- Q And those rules are not working well enough to keep disease away from the fish farm industry?
- DR. FLEMING: Since there are diseases present, yes, I would say that they haven't been able to eliminate the presence of disease in the farms.
- Q And the Norwegian Government does not regard those rules as sufficient to protect the wild fish?
- DR. FLEMING: I guess the question's a little vague because it's not specific to the particular rules, but there is, in terms of veterinarian regulations, they haven't been effective in eliminating diseases or the transfer of diseases between both wild and farmed fish both ways, disease and parasites.
- Q And let me ask you, Doctor, in terms of the risk of disease transmission to wild fish, is that worse or different in confined waters or smaller spaces than it is in the open sea?
- DR. FLEMING: Yeah, presumably, it would be. I think the laws of physics would suggest that in terms of number of propagules that could be spread and the likelihood of encountering propagules, yes.
- MR. McDADE: Could we have Aquaculture document 3 up on the screen, please?
- Now, because you're from Newfoundland, Doctor, I won't presume you know fully our geography, but we've heard evidence that the wild sockeye salmon swim up the East Coast of Vancouver Island in disproportionate numbers, I think 80 or 85 percent of the run. And now, does Norway have the similar problem, or --
- DR. FLEMING: I think that the situation in this part of the world is somewhat unique in the degree to which the migratory path, or the migratory path for a large number of fish is confined to a

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particular area. The same situation does not occur in Norway where the fish exit long fjords, but out into the open ocean.

Well, where they have long fjords, and so they'r
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- Q Well, where they have long fjords, and so they're confined until they exit, is there regulations prohibiting fish farms in those areas?
- DR. FLEMING: To a certain extent, there is. It depends on how the national fjord system is established. Sometimes the national fjord system covers only the innermost parts of a fjord, sometimes it covers, such as in the Trondheimsfjord, the whole fjord, but there are still the drift of disease, parasites.
- MR. McDADE: If we could have Aquaculture document number 6 up?
- Q And this is a map, Doctor, of the Discovery Islands, which is the narrowest part of that particular passage that I showed you in the larger map. Would you agree that it's particularly important to zone areas such as this to avoid disease transmission?
- DR. FLEMING: I believe it would be helpful, if my understanding is correct, that the sockeye salmon and the other species, large number of species, have to pass through a narrow point, and if these stocks are recognized as being significant, then, yes, it seems to be an important area that would require protection if there is significant effect of disease and parasites on those fish that pass through that area. Yes.
- Well, are you aware of any country in the world where fish farming is conducted in a volume where there is not problems with disease?
- DR. FLEMING: No, I'm not aware that there is a situation where fish farming is done in a disease-free manner.
- So to your experience, no matter how tough the rules around veterinarian practices and quarantine, disease develops everywhere?
- DR. FLEMING: Especially when there's contact with the open ocean or open environments, yes, I think that's true.
- MR. McDADE: Now, sorry, I think the document on the screen's already got an exhibit number, but can I mark the other one?

THE REGISTRAR: That will be 1628.

1 EXHIBIT 1628: Map entitled, "Fish Farming on 2 and around Vancouver Island and Coastal 3 British Columbia" 4 5 MR. McDADE: 6 Now, let me go to you, Mr. Last. B.C. has no such 7 zoning in place? 8 MR. LAST: Similar to the --9 Norwegian? 10 MR. LAST: No. 11 And you referred to LR&P plans and that stuff. 12 They don't zone fish farm locations based on their 13 contact with wild fish, do they? 14 MR. LAST: No. 15 So other than the northern part of B.C., which was put into a moratorium some years ago, there is no 16 17 zoning pattern or regulations in B.C. that 18 prohibit the siting of fish farms in a particular 19 location? 20 MR. LAST: Other than the appropriateness of a given 21 location geophysically and, you know, all of the 22 criteria that have to be taken into account. 23 places are more and less appropriate. 24 But would you agree that a zoning mechanism like 25 Dr. Fleming referred to from Norway would be 26 helpful in terms of protecting wild salmon? 27 MR. LAST: Would it be helpful? Possibly, yeah, it 2.8 could be. 29 And B.C. has no plans to consider that currently, 30 do they? 31 MR. LAST: Not that I'm aware of, no. 32 MR. McDADE: Now, can we have Exhibit 1589 up on the 33 screen? Sorry, page 5, I think, was the siting 34 requirements that we looked at. There we go. 35 Now, Mr. Last, this is a document you referred to 36 in your examination earlier. I think these siting criteria have pretty much been in place since 37 38 1997; isn't that right? 39 MR. LAST: Yes. 40 And they've been carried through most of B.C. 41 regulation of the aquaculture industry?

And they've been basically carried over holus-

same as what the province used for siting criteria

prior to the transfer to federal administration.

MR. LAST: As far as I know that this version is the

MR. LAST: Since that time, yes.

bolus into the federal regime?

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- Q So up until 2010, when there was a change of jurisdiction, all of the fish farm sites that are currently operating were approved according to that list?

  MR. LAST: That list and other considerations. These
  - MR. LAST: That list and other considerations. These were the siting guidelines that were applied, yes.
  - Right. And so despite all of the science that's taken place in the current century in respect of sea lice and disease, no one has though it sufficient to change the siting criteria in any way?
  - MR. LAST: The criteria have stayed the same, but all of that information is certainly available to, and has been available to decision makers.
  - Q If we can go to the first criteria, at least one kilometre in all --
  - MR. McDADE: Sorry, the second one.
  - Q At least one kilometre from the mouth of a salmonbearing stream determined as significant. Now, what's the purpose of that siting requirement?
  - MR. LAST: My understanding is that it's an attempt to create some distance between a salmon farm and streams that wild salmon rely on for spawning and for rearing.
  - Q And didn't the Salmon Aquaculture Review hear evidence and make recommendations in terms of trying to avoid areas where there's confined spaces?
  - MR. LAST: I'd have to go back and look. I see the logic of that, but I can't say for sure that I know that they heard that evidence.
  - Q And the logic of that, and the logic of keeping it one kilometre away from the mouth of a stream is to avoid wild salmon?
  - MR. LAST: It's to reduce the risk, that there is some concern, there is some uncertainty, and that is addressed by creating that spatial distance.
  - And so the logic of this is that in confined or narrow channels where the fish runs, the migratory runs of the wild sockeye are more concentrated, the risk is higher, isn't it?
  - MR. LAST: If there is a risk, it would be greater in those circumstances.
  - Q Now, you say that there have been other factors considered, but I suggest to you that the possibility of disease affecting the wild sockeye runs has never been a factor for B.C. in terms of

a siting decision; that's a fair comment, isn't it?

- MR. LAST: I couldn't really say because the information before a decision maker on any particular siting decision, or in the past for the province, licensing decision, that varies. That's on a case-by-case basis.
- Well, in all the documents that we've seen, in the 600,000 or so documents in the database, I've yet to see a document suggesting the province ever rejected a site because of wild salmon migratory routes. Are you aware of any of those?

MR. LAST: No.

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- Q What about you, Mr. Swerdfager, can you think of a site that's ever been rejected by the federal government because of its impacts on wild salmon migratory routes?
- MR. SWERDFAGER: No, I can't.
- In fact, it's the position of DFO, is it not, that there are no risks from disease transfer from fish farms to wild salmon? You don't recognize that risk, do you?
- MR. SWERDFAGER: I don't think I would characterize the DFO position as bluntly as you have. I would think that what DFO's position on matters related to disease for sometime has been that we wish to understand those risks better, that they may exist, they may differ from place to place, from time to time, from species to species. certainly, when DFO looks at citing decisions, whether it's with respect to, in this case, aquaculture or other matters, certainly, DFO has, in the past, given consideration to disease issues. And also, when it comes to siting, whether it's in a case like this criteria, or others, part of DFO's interest is to keep economic development in general, not just activities related specifically to the aquaculture industry, but more generally, away from areas that we consider to be sensitive habitat for a whole variety of reasons, some of which relate to salmon. So to suggest that the only reason that we would put this criterion, for example, in place is a concern about disease or aquaculture per se, is perhaps narrowly focussed. I think, in fact, our concerns tend to be broader in nature and focus on all marine ecosystem conservation and

protection and a concern about all economic development activities.

- Q Well, is it the belief of the federal government, Mr. Swerdfager, that by having a fish health management plan, by putting in these kind of veterinary measures, that you can eliminate the risk to wild salmon?
- MR. SWERDFAGER: I don't think any biologist or any department working in the biological area would say that we could eliminate risk to wild salmon to anything, for that matter. I think that for a start, we don't fully understand as a society, as a department, what all of those risks are. think that the fish health management plan concept is certainly one that substantially reduces or I certainly would stand to be minimizes risk. corrected by any of my colleagues in the Science sector, but my feeling would be that the likelihood of us taking a risk from existing to zero is probably unlikely. It's not something that I think any credible resource manager would want to state as categorically as that.
- Q Well, as you saw on the map that was up on the screen, there have been at least 10 fish farms approved right in the narrowest channel of the Discovery Passage, the narrowest place the wild salmon migrate through. Was that risk considered when they were approved?
- MR. SWERDFAGER: I wasn't part of the risk assessment decisions when those particular sites were approved, and maybe Andy might want to talk about those in the past, but I am very, very confident that quite a wide range of risks were considered when we made those siting decisions. Do you want to explain on that, maybe, a little bit.
- Q Well, no, no, I'm a little stretched for time here, sir. Let me help you with this.
- MR. SWERDFAGER: Well, maybe, if it would be all right, if we could just complete our answer to your question, that might be --
- Q All right. If Mr. Thomson can point me to a place where they considered it, I'd appreciate that. Can you do that, Mr. Thomson?
- MR. THOMSON: Yes, I can. In the **Canadian Environmental Assessment Act** screenings for several fish farms, which that may be an inclusion of the ones you're talking about, one of the

- valued ecosystems that's considered is impacts of fish health, and really, the basis of the position in considering it is that if the fish in the farm are kept healthy through proper management of the farm population, then the likelihood of any passage of pathogens to wild fish is, therefore, reduced.
- Yes, well, that certainly makes logical sense, but as we've heard in the evidence leading up to this, infections still happen despite the best rules that you have in place. Up to 30 high-risk fish infections a year, right? They're still happening today.
- MR. THOMSON: I'm sorry, I'm not sure of the records you're talking about.
- Q All right. Well, there are active fish infections every year on fish farms in British Columbia, aren't there? You're aware of that, aren't you?
  MR. THOMSON: Yes.
- Q Right. So despite the best efforts, you can't stop them?
- MR. THOMSON: Well, the efforts, again, around implementing a fish health management plan is to have the best efforts in place by the companies in order to manage the fish health of their stock, their stock being in net pens surrounded by the open oceans. You know, it seems to me that it would be logical to assume that some pathogens will be picked up in the open ocean, yes.
  - So the only way you can prevent wild fish from getting infections is to keep them away from migratory paths; wouldn't that make sense?
- MR. THOMSON: I'm sorry, you're asking the only way to keep wild fish from getting infections?

  O Yes.
- MR. THOMSON: I mean, wild fish get infections. I'm no expert on fish health, but my belief is wild fish get infections whether as part of the natural course of fish being in the natural environment.
- MR. McDADE: All right. Can I have Aquaculture number 23 up on the screen?
- This is the **Canadian Environmental Assessment Act** screening for the Dunsterville on the Discovery Islands.
- MR. McDADE: Can we have that marked as an exhibit? THE REGISTRAR: Exhibit, what are we at, here, 1629.

1 EXHIBIT 1629: Transport Canada, Canadian 2 Environmental Assessment Act (CEAA), 3 Screening Environmental Assessment Report 4 5 MR. McDADE: Can I have Aquaculture Exhibit 24 up on 6 the screen? 7 This is the **CEAA** assessment screening for the 8 Conville Bay site in the Discovery Islands. 9 MR. McDADE: Can we have that marked as the next 10 exhibit? 11 THE REGISTRAR: 1630. 12 13 EXHIBIT 1630: Transport Canada, Canadian 14 Environmental Assessment Act (CEAA), 15 Screening Environmental Assessment Report 16 17 MR. McDADE: 18 And is it your evidence that those **CEAA** screenings 19 would have considered the risk to wild salmon of 20 transmission of disease when we have disease 21 outbreaks? 22 MR. THOMSON: Well, I'm not familiar with these 23 particular two environmental assessments, as 24 they're authored by Transport Canada, but what I 25 said earlier was that I know in previous 26 environmental assessments authored by DFO, disease 27 risk was considered in the SIDK table, yes. 28 Now, Mr. Swerdfager, earlier, we had tabled the 29 application form for a new licence under current 30 rules. Let me suggest to you that nowhere on that 31 licence did they even ask whether the site is on a 32 migratory site, or not, for wild sockeye. It's 33 not even on the application form; is that fair? 34 MR. SWERDFAGER: I don't know. MR. THOMSON: I don't believe it's on that form, that 35 36 question, no. 37 So currently, the federal government takes no special steps in respect of farms that are on the 38 39 salmon migratory route? 40 MR. THOMSON: Well, under the current regime, which has

been in place since December 19th, 2010, no, but

management of aquaculture plans which are designed

to take an area management approach to aquaculture

And as I understand, the farms that are currently

we are in the midst of developing integrated

management within the Province of British

Columbia.

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Cross-exam by Mr. Leadem (CONSERV)

approved by the federal government were grandfathered, basically, over from the provincial regime, that's right?

- MR. THOMSON: Licences were issued for the same number of species and for the same level of production.
- Q There was no new assessment done?
- MR. THOMSON: There was an assessment of the licence production and the amount that was -- the past previous provincial licences were provided to the Department for review.
- MR. MARTLAND: Mr. Commissioner, I'm going to raise with respect to the time, simply to indicate that Mr. McDade is at the 20-minute mark, I'm afraid. I don't know if he's managed to succeed in contributions from colleagues, but in the absence of that, based on the premise that is applied fairly with all counsel, I will ask that we move on to the next counsel.
- MR. McDADE: That's all I can do.
- MR. LEADEM: Leadem, initial T., appearing as counsel for the Conservation Coalition. I want to begin with Conservation document number 62, if I may?

## CROSS-EXAMINATION BY MR. LEADEM:

Q Earlier, Mr. Last, you may recall that you tendered into evidence the provincial response, and then through Mr. Thomson, the federal response to the Porter audit. Is what you see before you, in fact, the Porter audit that he prepared for the B.C. Pacific Salmon Farm?

MR. LAST: It looks like it, yes.

MR. LEADEM: Could that be marked as the next exhibit, please?

THE REGISTRAR: 1631.

EXHIBIT 1631: An Audit of the Management of Salmon Aquaculture for the Protection of Wild Salmon in British Columbia, by Gareth Porter, for the B.C. Pacific Salmon Forum, dated May 9, 2006

## MR. LEADEM:

Q And if I could just ask you to briefly turn to page 23 of that. What Mr. Porter did was basically do a rating based upon different criterion which are explained in the report, and I

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don't have the time to actually go through each of 1 these criterion. But essentially, he looked at 3 B.C. in comparison to Atlantic Canada, Iceland, Ireland, Norway, Scotland, and the United States. 5 And my understanding, based upon the criterion 6 that a high score is good and a relatively low 7 score is not as good. Is that your understanding, 8 as well, Mr. Last? 9 MR. LAST: Yes. 10 So you see that B.C. ranks somewhere in the 11 middle, somewhere below Norway and Iceland and the 12 United States, but apparently better than Scotland 13 and Atlantic Canada, and slightly better than 14 Ireland; is that right? 15 MR. LAST: According to Mr. Porter's report, yes. 16 Okay. 17 MR. LEADEM: Could we now turn to Conservation document 18 Tab 1, please? 19 Mr. McDade asked you a number of questions, Mr. 20 Last, about the siting criterion that the Province 21 had adopted and I'm advised that this looks like 22 it's the siting criteria from the Province. Do 23 you recognize it as such? 24 MR. LAST: Yes. 25 MR. LEADEM: Could we have that marked as the next 26 exhibit, please? 27 THE REGISTRAR: 1632. 2.8 29 EXHIBIT 1632: Criteria for siting new 30 finfish aquaculture facilities 31 32 MR. LEADEM: 33 And it appears as though there's 15 criteria. 34 MR. LEADEM: And if we look at Exhibit 1589, Tab 5, and 35 if we can somehow split the screen and page 5 of 36 that, Mr. Lunn? 37 MR. LUNN: Exhibit, one more time, please? 38 MR. LEADEM: I think it was 1589, it was the licence 39 application that Mr. McDade referred to. 40 We see that with one juxtaposition, I believe, of 41 the last two, essentially, the federal application 42 that's in place for present applications for 43 aquaculture is identical to the B.C. one that you 44 see on the right-hand side; is that right? 45 You're saying it is identical? MR. LAST: 46 Yes.

MR. LAST: I believe it is.

1 Okay. 2 MR. LAST: Yeah. 3 MR. LEADEM: Could we have that Tab 1 marked as the 4 next exhibit, please, the siting requirements? 5 THE REGISTRAR: Well, you did, you marked it 1632. 6 MR. LEADEM: Oh, sorry. Could we have Conservation 7 Tab 2, please? 8 Now, I'm turning to you, Mr. Thomson, do you 9 recognize this? 10 MR. THOMSON: Yes, I do. 11 All right. Emily Drouin, I take it, is one of 12 your employees within the Aquaculture Division of 13 DFO; is that correct? 14 MR. THOMSON: Emily Drouin was an employee of the 15 Aquaculture Management Division in Ottawa. 16 came to British Columbia, worked on an assignment and then returned to Ottawa to a position. 17 18 All right. I'm going to just look at her email to 19 you, in part, and I believe you were copied on 20 this, as well, were you not, Mr. Swerdfager? 21 MR. SWERDFAGER: If we scroll down, I think that the 22 originator of this email chain is me. Well, in 23 fact, probably, it's David Lane, but I was 24 forwarded, in this email chain, a paper from David 25 Lane, who works for the T. Buck Suzuki Foundation, 26 and I apologize, I forget the name of the author 27 of the paper, but it was -- okay, here we go, 28 Steven Catania. 29 Right. 30 MR. SWERDFAGER: And in the document, they offered a 31 number of recommendations to us. It was sent to 32 me at my request with respect to how they would 33 see a well-designed regime rolling out, so to 34 speak, with respect to making sure that the regime 35 we were building is as transparent as possible in 36 terms of information sharing, and I think you'll 37 see in my note on May 19th, at 8:21 a.m., I'm working some weird hours it seems, that I felt the paper was really quite good, and I forwarded it 38 39 40 on, asking for any advice that staff may have as 41 to whether or not there would be any problems in 42 implementing it. All right. So you were of the view, certainly, 43 44 that the report that was done by Steven Catania

from University of Victoria, Environmental Law

with respect to transparency that you wanted to

Centre, contained some really good recommendations

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adopt into the DFO program; is that fair?

MR. SWERDFAGER: I thought it was an excellent paper and, in fact, among the various inputs received, as part of the development of the regulation, itself, and the policy process, I found it had more effect on, certainly, my thinking than a lot of the papers that we received. I thought it was extremely good and I think much of what was recommended in that paper, in fact, has sort of found itself, found its way, rather, into the regulation and the conditions of licence that flow from it.

All right. Now, going, then, up in the chain to the email from Ms. Drouin, she asks a very interesting question. She says:

Do we have a process in the works to obtain B.C. Salmon Farmers' Association data as historical need-to-know and for upcoming reporting and auditing purposes?

So I'm going to ask that question of you, Mr. Swerdfager.

MR. SWERDFAGER: Yeah.

Q Do you have that in place?

MR. SWERDFAGER: I assume it's going to be scrolled up. I think that what Emily was asking is are we going to be able to get that? I think that the way we have established our regulation -- now there's some music coming in my -- oh, okay, sorry. The way we have established our process now in terms of the regulations and the conditions of licence that flow from it allows us to obtain all of this information and some of it has been made publicly in a historical context. Certainly, going forward, we're very confident we can compel its production.

Q So you're setting something in place?

MR. SWERDFAGER: Something is in place now. When you look at the content of the reg. and the licence conditions that flow from it, the kinds of things that Emily's asking about, how are we going to get this information, we now have a system to do so.

MR. LEADEM: Okay. Could we have that marked as an exhibit, please?

THE REGISTRAR: 1633.

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EXHIBIT 1633: Email from Andrew Thomson to Emily Drouin, dated May 19, 2010, re further views on transparency and monitoring

MR. LEADEM: And could we go to Tab 3 of the Conservation documents, please, Mr. Lunn?

- Q This is a proposal of Canadian Fish and Seafood Sustainability Briefings. Are you familiar with this, Mr. Swerdfager or Mr. Thomson?
- MR. SWERDFAGER: I'm familiar with it, I think, yes. MR. THOMSON: Yes.
- All right. It appears to be that there was a proposal put to brief trade commissioners in Ottawa concerning an outreach to U.S. retailers with respect to aquaculture and marketing of aquaculture products from Canada in that country; is that correct?
- MR. SWERDFAGER: You were correct right up until the last part of that statement. What we proposed to do was bring together the trade commissioners that are based in, I believe it's 13 consular offices around the United States to talk to them about not only aquaculture, but sustainable fisheries management overall. You can see, in the second paragraph, the people that are listed there, it's not just aquaculture. And essentially, what we were looking to do was to respond to a very large number of questions that trade commissioners based in the United States were directing our way with respect to fisheries and aquaculture management and so rather than trying to keep doing it one by one, question by question, we sought to bring trade commissioners together. We ended up actually doing that in Toronto with a quite a large workshop. And then we also engaged in a number of market outreach sessions in key markets throughout the United States, but the only point I would suggest maybe I wouldn't entirely agree with your characterization of it, certainly, the Department of Fisheries and Oceans was not in the marketing aquaculture products. That's very much the role of the industry, itself, that's not something we do, but we were engaged in meeting with people in markets to explain the management regime that we have in place for wild and capture fisheries.
- Q All right. If you turn to page 5 of that report,

- you'll see there's a table with respect to
  anticipated costs of briefing sessions to FAM, and
  that stands for Fisheries Aquaculture Management;
  is that right?

  MR. SWERDFAGER: Fisheries and Aquaculture Management,
  - MR. SWERDFAGER: Fisheries and Aquaculture Management, yeah.
  - Q And I understand that that cost of \$50,000 was a cost that DFO assumed, that was paid; is that right?
  - MR. SWERDFAGER: No, that's a projected -- you'll see at the top it says, "Anticipated Costs." So the workshops in Houston, New Orleans, Philadelphia, Miami, and Washington did not take place. The workshop in Boston took place, but only as part of the Boston Seafood Show, and so the cost of that was not incremental to that work. The workshop, I forget if I skipped over it, we did not have one in Denver or in Houston. So in terms of our total expenditures, I would say it was approximately \$10,000 in total.
  - O Okay. And that was --

- MR. SWERDFAGER: And those were --
- Q That cost was assumed by DFO, then?
- MR. SWERDFAGER: Well, the costs associated with them were to get me and one of my staff, and one of my colleagues in the capture fishery side of things to those sites where we did conduct the sessions.
- Q And then if we turn the page, we see Annex 1 is a report on sustainability training in Vancouver, April 10th, 2008. You attended that, did you not?
- MR. SWERDFAGER: I did. It was just up the road, here, at Library Square.
- Q And Mr. Thomson, you attended, as well, on behalf of DFO?
- MR. THOMSON: I believe I attended portions of it, but not the entire event.
- Q All right. And then --
- MR. SWERDFAGER: Actually, Andy was there briefly in the morning and he had other things, so he was there to actually meet people as we kicked off and then had to leave.
- Q And there's a report on page 7, and I draw your attention, Mr. Swerdfager, to the next-to-the-last paragraph on that, where you relate that you met with Greenpeace and Greenpeace had launched a campaign --
- MR. SWERDFAGER: Mm-hmm.

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-- and your reaction to that campaign. That's an
 1
            accurate reflection of what you said at that
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            meeting, is it not?
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       MR. SWERDFAGER: Yes, it is.
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       MR. LEADEM: Next exhibit, please.
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       THE REGISTRAR: Oh, I'm sorry, 1634.
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                 EXHIBIT 1634: Canadian Fish and Seafood
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                 Sustainability Briefings, Proposal
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       MR. LEADEM: Could we now move to Tab 7 of the
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            Conservation Coalition's documents?
            I'm hoping that you recognize this, Mr. Thomson,
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            because it appears that you were a recipient from
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            an email from Nancy Fowler that referenced a visit
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            with United States senators and B.C. fish farms?
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       MR. THOMSON: Yes, I recognize the document.
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       MR. LEADEM: Could we have that marked as the next
            exhibit, please?
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       THE REGISTRAR:
                      1635.
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                 EXHIBIT 1635: Email from Nancy Fowler to
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                 Stewart Lindale et al dated April 14, 2008,
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                 Re: US senators and B.C. fish farms
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       MR. LEADEM:
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            And there is a bunch of what are termed key
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            messages, generic and key messages, sea lice.
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       MR. THOMSON: Yes.
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            Did you review those, Mr. Thomson?
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       MR. THOMSON: Did I review them?
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            Yes. Did you actually meet with any of the U.S.
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            senators who were meeting with officials within
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            DFO to get briefed on aquaculture facilities in
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            the industry, here, in British Columbia?
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                    Well, I was part of a group that met with
       MR. THOMSON:
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            some state senators from California that came up
            to tour aquaculture facilities and also to talk
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            about aquaculture and how it's managed, and so if
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            that is what this particular email's referring to,
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            then, yes, I remember doing that.
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            Under the heading, "Key Messages, Sea Lice," the
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            second bullet down says:
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                 DFO laboratory studies continue to show no
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                 evidence of a negative impact to juvenile
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                 pink salmon as a result of exposure to farm
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source sea lice. 1 3 Is that the message that DFO presented to the U.S. 4 senators who were meeting with respect to B.C. 5 fish farms? 6 MR. THOMSON: Well, I'm not sure if that particular 7 message was presented, no. 8 But certainly, that was being proposed as a 9 message to go out to the U.S. senators by this 10 email chain, was it not? 11 MR. THOMSON: These were suggested messages provided to 12 provide advice or information to the U.S. state 13 senators, yes. 14 MR. LEADEM: Has that been marked yet? I've lost 15 track. 16 MR. LUNN: Yes, it has. 17 MR. LEADEM: Thank you. Tab 15, a Conservation 18 document. 19 I'm going to turn to both you, Mr. Thomson, and 20 you, Mr. Swerdfager, do you recognize this email 21 chain from Sharon Ford? 22 MR. THOMSON: Yes. 23 Both of you do? If we scroll down just slightly, you'll see that there's an email that you 24 25 emanated, Mr. Swerdfager, on 29 March 2010. 26 if you need to reference the other side, there's a 27 long email from Mary Ellen Walling of March 22, 28 2010. And then your reaction to her long email, I 29 suggest to you, is contained in your email of 30 March 29; is that a fair, accurate representation 31 of what's going on? 32 MR. SWERDFAGER: It does appear accurate, yes. 33 MR. LEADEM: Could that be marked as the next exhibit, 34 please? 35 THE REGISTRAR: 1636. 36 37 EXHIBIT 1636: Email from Sharon Ford to 38 Andrew Thomson et al dated March 29, 2010, 39 re: letter to MAL from BCSFA re information 40 release and further consequences 41 42 MR. LEADEM: Could we have Conservation document number 60, please? 43 44 Now, either you, Mr. Thomson, or you, Mr. 45 Swerdfager, do you recognize this DFO National 46 Aquaculture Communications and Outreach Approach?

MR. SWERDFAGER: Yes, I recognize it as a draft

or approved.

Do you know who prepared this?

5 6 7 MR. SWERDFAGER: I'm pretty sure this was prepared in our communications directorate with a lot of input from a consultant based in Halifax, whose name I can't remember, Mike Morandel (phonetic), I think, but perhaps I'm wrong on that.

document that was developed, but never completed

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All right. I'm going to ask you to turn to the Executive Summary on the second page.

11 12 MR. LEADEM: And the second paragraph, if we can just highlight that briefly, Mr. Lunn.

13 14 15 There's mention made in the first paragraph about aquaculture production in Canada, how it's more than doubled since 1996, what its value is, and then it says:

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To that end, the Government of Canada, has committed \$70 million over the next five years to build their aquaculture industry to make it more successful and competitive.

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That sentence is correct, is it not, Mr. Swerdfager?

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MR. SWERDFAGER: No, part of the reason I identified this as a draft document is it's written by somebody outside the Aquaculture Program and I believe, outside the Department. The Sustainable Aquaculture Program, which is what's referred to here as a \$70 million program, does not have as its goal to build our aquaculture industry to make it more successful and competitive. Sustainable Aquaculture Program is very much focussed on fostering a sustainable aquaculture industry in our country. A large part of its investment is in the Science capacity of DFO, to support science directly tied to a regulatory agenda. There is certainly an element of the Sustainable Aquaculture Program that is oriented towards fostering and creating the conditions of success of the industry, but this goal statement here, if you will, is too much focussed on the economic development side of the agenda and does not appropriately address the true mandate of the program, which is the sustainability dimension that I referred to this morning.

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Q Well, you certainly would agree that Government of

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Canada has committed \$70 million to promote aquaculture in Canada; is that not correct? MR. SWERDFAGER: No, I would not. Sorry, I don't wish to be difficult, but I would not choose that phrasing. I don't think that the government's commitment is, to use your term, "to promote aguaculture." In my view, that implies, and perhaps I'm just misunderstanding your word, but that implies a whole series of marketing activities, and so on, and so on, and so on. Sustainable Aquaculture Program, which is a \$70 million program over five years, I could describe it to you if you wish, I know your time is short, so I will just simply identify that it has a strong science component to it, it's got a very strong environmental regulation component to it, it's got an innovation and sustainability component, and a strong focus on third-party certification. So I would not characterize it as something that is, "promoting the aquaculture industry."

- Q Can I at least get you to agree with me that Canada has devoted \$70 million with respect to some concept of sustainability within the aquaculture industry?
- MR. SWERDFAGER: Yes, I could agree with that characterization of it, yeah.
- Q All right. And that that's money that Canada puts front and centre in order to promote that industry, and it's a sustainable industry?
- MR. TAYLOR: Well, that word, "promote," that the witness will not accept, has snuck into the question. I don't think it's a fair question.
- MR. LEADEM: Well, with all due respect, Mr. Taylor, it's a fair question because the witness has qualified the answer and now I'm trying to get him back again to show how this funding actually is part of the aquaculture and liaison between the aquaculture and DFO. Let me rephrase it, Mr. Commissioner.
- Q Essentially, as I understand it, do you consider that the Department of Fisheries and Oceans, at least with respect to the aquaculture management directorate, is in somewhat of a partnership with the industry in order to further the aims of the industry?
- MR. SWERDFAGER: No, I would not consider us to be in a

1 partnership with the industry. I think that a large part of our agenda is very much focussed on 3 a regulatory component in which we enforce the law. I don't think I would characterize that as a 5 partnership. A large part of our program is 6 devoted to putting in place the scientific 7 research resources required for -- do you wish me 8 to continue, or should I stop? 9 MR. LEADEM: All right. My time is apparently up, Mr. 10 Commissioner. 11 THE COMMISSIONER: Well, he's in the middle of 12

answering your question, Mr. Leadem.

MR. LEADEM: Oh, I'm sorry.

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MR. SWERDFAGER: Should I continue, sir?

THE COMMISSIONER: Yes, please.

MR. SWERDFAGER: And a significant component of the investment is in the research component of the Department in support of a regulatory agenda. again, another area of investment is in third party certification. So all of this to say, from my perspective, at least, whilst we do work with industry and with others to create the conditions for a sustainable aquaculture in this industry in this country, I would say no, we are not in partnership with them. We work closely with them, they are the subject of our regulatory and management attention. Obviously, we work with them, but I would not characterize it at all as a partnership.

MR. LEADEM: Might this be marked as the next exhibit, please?

THE REGISTRAR: 1637.

EXHIBIT 1637: DFO National Aquaculture Communications and Outreach Approach

Sorry, Mr. Commissioner, my hearing is not MR. LEADEM: as good as it ought to be.

- MR. MARTLAND: I have counsel for Areas D and B for five minutes.
- MS. PACEY: Thank you, Mr. Commissioner, thank you, Panel. My name's Katrina Pacey, initial K. I'm counsel for Area D, Salmon Gillnetters Association and the Area B Seiners. I have five precious minutes. I'm going to spend most of those minutes asking questions to you, Mr. Last, and then I'm going to move over and ask some questions of Mr.

# CROSS-EXAMINATION BY MS. PACEY:

Thomson.

Q We've heard over the last several days about rates of disease on fish farms and we've heard about the fact that in British Columbia, there's been an annual average of 130 fish health events that are reported by industry each year, and that 25 percent or, approximately, 30 of those are considered to be classified as significant risk to Fraser River sockeye salmon. So my question for you, Mr. Last, is that during the years that the Province was responsible for the licensing of aquaculture, there were, based on the numbers I've just told you, and probably based on your own experience, outbreaks on fish farms of high-risk disease every single year; isn't that correct?

- MR. LAST: I don't know if I would characterize them as outbreaks. I'm not a fish health expert. I'm not qualified to comment on the significant difference that I am aware of from my discussions with our fish health people about the difference between the presence of pathogen and calling that disease. That is not my area of expertise.
- Okay. Then perhaps we'll just take it back to the rates of fish health events, and you'd agree with me that there are 130 or so odd fish health events per year on fish farms, correct?
- MR. LAST: I'd have to take your word for that.
- And would you agree with me if I said that, in fact, there have been no years where there were not disease and pathogens present on fish farms in British Columbia; is that right?
- MR. LAST: Yes.
- Q And would you --
- MR. PROWSE: Mr. Commissioner, the witness has already stated he's not an expert in disease. We have a full panel tomorrow when the counsel can explore this. I submit this is not a fair line of questioning.
- MS. PACEY: I can indicate where I'm going, which is merely to discuss the role of licensing and siting in the management of disease.
- Q I'll ask you, then, this question, and you can agree with me, or not, and that's that probably, at this moment, there are pathogens and disease on

- fish farms operating that have not been detected, or that farms are operating with those diseases and pathogens present?
  - MR. PROWSE: Mr. Commissioner, the question of the licensing and fish health management plans is something that should be dealt with, in my submission, tomorrow, and not with this witness.
  - MS. PACEY: Commissioner, I'll cut to the punch line, thank you.
  - Q Is there anything in the Province's licensing regime as it was prior to the **Morton** decision that in your opinion could completely prevent disease from occurring on fish farms in British Columbia?
  - MR. LAST: Not that I'm aware of. Again, my expertise in that area is very limited.
  - Q And the licensing and regulation in British Columbia up until the **Morton** decision required, essentially, the monitoring and reporting of disease, correct?
  - MR. LAST: Yes, with provincial audit, as well.
  - Thank you. And in terms of the interventions that may follow a fish health event or a significant disease on a fish farm, interventions would include such things as quarantine; is that right?
  - MR. LAST: I'm not sure, again, whether that would be perhaps one of the tools that a fish health veterinarian would have at their disposal. I'm not sure. I don't know.
  - Then perhaps specific to the licensing question, I'll ask you this. I'm going to suggest to you that in British Columbia, there never has been an incident where a fish farm has been shut down, or had its licence revoked as a result of a disease outbreak; isn't that correct?
  - MR. LAST: Not that I'm aware of yet.
  - And in fact, there is nothing in the licensing scheme as it was in British Columbia when this was still a matter of the Province's jurisdiction that set out when a licence revocation could occur; isn't that right?
  - MR. LAST: I think that a licence could be revoked for a number of reasons. If you could be more specific, there's any number of ways or reasons for which a licence could be revoked.
  - Q What I'm suggesting to you is that there's nothing clearly articulated in the licensing regime regarding the fish health management plan itself

that would lead a farmer to understand at what point their license could be revoked?

- MR. LAST: Specifically related to fish health management plans?
- Q That's correct.

- MR. LAST: Fish health management plans were required as a term and condition of licence, in order to be in compliance with the legislative requirement, those plans had to be in place and approved by a provincial fish health veterinarian.
- So my final question is that you'd agree with me if I said that the only way in which, within the scheme of licensing and siting, that the Province can mitigate the risk of fish farms and the possibility of disease is by deciding where and when they occur; is that correct?
- MR. LAST: No, I wouldn't agree. I think that veterinarians had or have the ability to make recommendations that could go to practices, husbandry practices that could mitigate those risks, as well.
- MS. PACEY: Those are my questions. Thank you, Mr. Commissioner.
- MR. MARTLAND: Mr. Commissioner, I'll just alert everyone, I think we're in a position to complete today, but we are tight on time. I'm grateful for counsel being focussed. I wonder if I can at least canvass, Ms. Gaertner's next on the list so she might rise, but I'll canvass the possibility of perhaps a five-minute break this afternoon, as opposed to the longer break. I have next counsel for the First Nations Coalition at 20 minutes.
- MS. GAERTNER: Mr. Commissioner, Brenda Gaertner, and with me, Leah Pence. I want to put on record that subsequent to the discussion I had with you at the end of the day yesterday, I have not required any new time today. Everyone is under an extreme short amount of time, and our coalition was given no more time than any of the other participants here, despite the unique rights that First Nations I will not be able to finish with this have. panel today. I'll do my best to ask questions of Mr. Last, who will not be here. I'm going to pass on questions of Dr. Fleming, not because I find your work uninteresting, but because I do need to get through a fair bit of work with Department of Fisheries and Oceans.

## CROSS-EXAMINATION BY MS. GAERTNER:

- Q So Mr. Last, just because you won't be here, I'll start with the primary question I have for you. To your knowledge, given that most of the existing finfish aquaculture licences along the Fraser River sockeye salmon migratory route were issued in the 1980s and '90s, and before the Supreme Court of Canada decision in *Haida*, which was in 2004, can you confirm my understanding that there were no substantive consultation processes between the Province of British Columbia and First Nations regarding the location, siting, production and volume levels of these plants, or of these farms at the time in which the licences were issued?
- MR. LAST: That was well before my time in government, and I'm not aware of what consultation processes were in place at the time. I couldn't speak to that authoritatively.
- Q Were you aware that the consultation processes occurred?
- MR. LAST: No, I don't have any knowledge of that.
- Q It is something that, given your position, you would have knowledge, or you would have been advised of once you took that position?
- MR. LAST: No, I just don't know.
- You wouldn't have been advised whether the Province had engaged in a consultative process with First Nations on the siting of these farms?
- MR. LAST: When I started working with government, I was certainly aware after that time of the need for consultation and the processes that were in place to meet that obligation.
- Q Could I take you to Exhibit 1615, which is a document your counsel went through at some length with you today, and take you to the First Nations section, which is not marked, the pages aren't marked, item number 38. As I understand it, there, you've -- I'll ask my question. The First Nations are going to be consulted now, as of 2006, as it relates to any new sites?
- MR. LAST: Sorry, what's your question, again?
- Q Was it the Province's approach as of 2006 and their response to the SAR recommendations that First Nations would only be consulted as it relates to any new sites?
- MR. LAST: No, there were consultations, there was some

consultation undertaken for amendments. 1 2 Any significant amendments as it relates to those 3 sites as it relates along the migratory route? MR. LAST: I don't know specific to those particular 5 I'm not familiar with those particular sites. 6 files. I can only speak in general terms about 7 the Province's approach to consultation. 8 Which was developed sometime after the Supreme 9 Court of Canada decision in Haida? 10 MR. LAST: Yes. 11 And that's in 2004. 12 MR. LAST: Okay. 13 Thank you. I'm going to turn most of my questions 14 to you, Mr. Swerdfager and Mr. Thomson and pick it 15 up from there, and I suffer, or we suffer from the Policy and Practice Report being a little bit slim 16 on the work that you have done with First Nations 17 18 Fisheries Council and otherwise so I've got to 19 fill in some dates so I'm going to do a chronology 20 with you and hopefully do that as quickly as I can, to take you through a number of documents, 21 22 and then get some of the questions on siting and 23 licensing, but I'm going to go as quickly as I can 24 at the beginning, here. 25 You're familiar with the work of the First 26 Nations Fisheries Council; is that correct? 27 Yes. MR. THOMSON: 28 And you know that they were mandated in 2007 29 through the Fisheries Action Plan, which is 30 Exhibit 1189, but I don't need to take you to 31 that, you know that? 32 MR. THOMSON: Sorry, I did not know that that was the 33 mandate that instituted it, but my ignorance. 34 All right. Are you familiar with the resolutions 35 that were provided by the Union of B.C. Indian 36 Chiefs in the summit to provide the First Nations 37 Fisheries Council with the mandate to engage with 38 senior DFO representatives on the issues of aquaculture? 39 40 MR. THOMSON: Yes, I am aware of that. 41 And if I could take you to First Nations Fisheries 42 Council document number 5, please. Are you 43 familiar with this resolution? This is a 44 resolution of the UBCIC, providing authority for 45 the First Nations Fisheries Council to engage in 46 these discussions?

MR. THOMSON: Yes.

And if I could also take you to document number 6, 1 which is a related resolution on these matters. Are you familiar with those? 3 4 MR. THOMSON: Yes. 5 MS. GAERTNER: Could I have those marked as the next 6 exhibits? 7 THE REGISTRAR: Document number 5 will be marked as 8 1638. Document 6, 1639. 9 10 EXHIBIT 1638: Union of B.C. Indian Chiefs, 11 40th Annual General Assembly, September 16th 12 to 18th, 2009, Harrison Hot Springs, B.C., Resolution no. 2009-35, "B.C. First Nation's 13 14 Statement of Solidarity on Aquaculture." 15 16 EXHIBIT 1639: Union of B.C. Indian Chiefs, 17 40th Annual General Assembly, September 16th 18 to 18th, 2009, Harrison Hot Springs, B.C., 19 Resolution no. 2009-36, "B.C. First Nations 20 Statement of Jurisdiction on Aquaculture 21 22 MS. GAERTNER: 23 And to your knowledge, the First Nations Summit 24 also passed resolutions in the same form and 25 content of these resolutions? 26 MR. THOMSON: To my knowledge, yes. 27 MS. GAERTNER: Yes. Mr. Commissioner, I discovered 28 last night that we didn't have the Summit 29 resolutions. They were passed on September 25th. 30 There are two almost identical resolutions. We 31 will be providing those, but they were provided 32 and I'll get those to you as soon as I can this 33 week, Mr. Thomson. 34 Now, let's turn to Exhibit 1638, which is document 35 number 5, and you'll recognize that this is a 36 source of the First Nations Fisheries Council's 37 mandate in aquaculture issues, and I'll take you

to the principles on page 3 and 4 of this

respected each other's autonomies. Most

input into the day-to-day management of

quite familiar with. They're consistent and I'll

take you through them, that they recognized and

considered within the territories. They wanted

aquaculture industry. They required engagement in

importantly, they need to be engaged from the

initial discussions when farm sites are being

These are principles I'm sure you're

document.

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the science that requires decision making on the management and regulation of aquaculture. As inherent stewards of their territories, they need to be involved in the monitoring and compliance of the industry. Those are matters and concerns that have been consistently raised with you in your discussions with First Nations; is that true?

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MR. THOMSON: Yes, they have.

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I'd like to take you to the Policy and Practice Report, and in particular, paragraphs 33 and 34. Now, we start in paragraph 33 and it talks about DFO's November 2009 discussion document which outlines the 27 strategic questions relating to DFO's assumption of jurisdiction.

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MS. GAERTNER: And the discussion document is at Tab 8 of the First Nation Coalition's documents. wonder if we could bring that forward?

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Is that correct?

19 20 MR. THOMSON: Yes. MS. GAERINER: Could I have that marked as the next exhibit?

2.1 22

THE REGISTRAR: Exhibit 1640.

2.3 2.4

EXHIBIT 1640: Federal B.C. Aquaculture Regulation & Strategic Action Plan Initiative, Discussion Document

26 27 2.8

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#### MS. GAERTNER:

And this is one of the 27 strategic guestions that DFO was seeking feedback on and then paragraph 34 of the PPR jumps to a time when the proposed Pacific Aquaculture Regulations are posted. Do you see that in the PPR?

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MR. THOMSON: Yes.

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You'll agree with me that that movement between the November 2009 discussion document and then the posting of the draft Aquaculture Regulations misses out a fair bit of chronology and a fair bit of work that was done between DFO and First Nations? Do you agree with that?

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MR. THOMSON: Yes, there was lots of work done between those two periods of time.

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All right. I'll have the record noted on that.

44 45 MR. THOMSON: And prior to. And prior to, as well.

46 47 And we're going to fill that in. I just needed to mark that as it relates to the Policy and Practice Report. Correct that before DFO even released its

November 2009 discussion document, both you, Mr. 1 Thomson, and Mr. Swerdfager, had met with First 3 Nations in June 2009 to discuss the impacts of the Morton decision and the DFO takeover of 5 jurisdiction for finfish aquaculture; is that 6 correct? 7 MR. THOMSON: Yes. 8 And then following the release of the November 9 2009 discussion document, DFO and the First Nation 10 Fisheries co-hosted a series of nine community 11 meetings with First Nations in February and March 12 of 2010?

MR. THOMSON: Yes.

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- Q And clear at the time of planning those community meetings that both First Nations Fisheries Council and DFO saw those community meetings as just a first step, just the beginning of their discussions between DFO and First Nations as it related to your regulation of aquaculture and finfish?
- MR. THOMSON: Certainly, it was the beginning of consultations, yes.
- And it's your understanding that the First Nations Fisheries Council were hosting those meetings, they did not see their involvement as a consultative engagement?
- MR. THOMSON: No. I mean, we used the services of the First Nations Fisheries Council to facilitate and host the meetings, but the discussions were, or the reason why I attended was the discussions were between the invited First Nations and myself.
- MR. SWERDFAGER: I wonder if I could just amplify on that just very briefly. One of the things that FNFC was consistent in their views in emphasizing both to Andy and to myself, and to others in DFO, is that they did not and do not serve as representatives of First Nations and that the dialogue that we were to have is one that they were facilitating and so on, engaging, as opposed to seeking to represent First Nations, and we approached it in that manner.
- Q And it's also accurate to say that the First Nations Fisheries Council made it clear that these community information sessions, and those that were held in February and March of 2010 didn't fulfill Canada's duty to consult?
- MR. SWERDFAGER: They certainly emphasized the view

that in their opinion, there was an obligation on us to do far more than just that, that they felt that those were, as you put it, just a first step, and that they did not meet, in their view. We learned more through the report, itself, in terms of what we ought, in their view, to have done. Okay. Then I'm just going to take you now to

- Canada's Tab number 12, which is a copy of a sworn affidavit by yourself, Mr. Swerdfager; is that correct?
- MR. SWERDFAGER: Yes, that's correct.
- Q I wonder if I could go to paragraphs 51 and 52. And this affidavit was sworn in 2009 and provided to the court, is that correct, in Canada's efforts to extend and have a longer timeframe in which to respond to the **Morton** decision?
- MR. SWERDFAGER: Yes, that's correct. The affidavit in this draft is dated November 7th. I believe it was actually put before the court on the 9th, but that is the date it was sworn.
- Q Thank you. And I'm going to go specifically to paragraphs 51, in which you note that First Nations are highly interested in the aquaculture domain in B.C. and have very clear expectations they will be effectively consulted in the development of any new regulatory regime established pursuant to the *Morton* decision. And that's your understanding then and it's your understanding today; is that correct?
- MR. SWERDFAGER: That is correct.
- Q And you'd agree that consultation with interested parties and especially with First Nations would be required before DFO drafted and tabled the new Regulations for Aquaculture; is that correct?
- MR. TAYLOR: I object. That calls for a legal answer.
- MS. GAERTNER:
- Q Isn't that what you swore to in paragraph 51 and 52?
- MR. TAYLOR: Well, I think the affidavit speaks for itself.
- MS. GAERTNER:
- Q Well, if you could scroll down to 52, I'm just confirming that this is the understanding of the affiant and the witness.
- MR. SWERDFAGER: So where are we, then? In 52? Okay. The point made here is that we need time to consult with people in the development of the

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PANEL NO. 58
Cross-exam by Ms. Gaertner (FNC)

regulation.

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            And you were including in that paragraph First
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            Nations, surely?
       MR. SWERDFAGER: It says "given the range of
            interests," yes, so included in that would have
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            been First Nations. And the argument being made
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            here is that the time assigned to DFO to develop a
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            regulation in one year was insufficient to allow
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            us to engage fully, not only with First Nations,
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            but with all people and parties that have an
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            interest in the regulation, itself.
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            And in addition, in this paragraph, the point that
            you were making is that any lack of consultation
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            or even a perceived lack of consultation or
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            opportunity to provide input would be unlikely to
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            engender support for the new regime and could also
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            create legal risks; is that correct?
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       MR. TAYLOR: Well, the first part is okay and the
19
            second part's not.
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                      It's in his affidavit.
       MS. GAERTNER:
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       MR. SWERDFAGER: I think, certainly, the
22
            characterization of it at the bottom is that there
23
            would be a potential that we could create legal
24
            risk, for sure.
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            And one of those legal risks, of course, was your
26
            legal obligation to consult First Nations?
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       MR. SWERDFAGER: Those would be among them, yeah.
28
            Yeah, thank you.
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       MS. GAERTNER:
                     Could I have this affidavit marked as an
30
            exhibit?
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       THE REGISTRAR: Exhibit 1641.
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33
                 EXHIBIT 1641: Affidavit of Trevor
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                 Swerdfager, November 5, 2009
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                     Mr. Commissioner, I'm in your hands.
       MS. GAERTNER:
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            Would this be an appropriate time to take the
38
            afternoon break?
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       THE COMMISSIONER:
                         Yes, thank you.
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       THE REGISTRAR: The hearing will now recess for five
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            minutes.
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                 (PROCEEDINGS ADJOURNED FOR AFTERNOON RECESS)
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                 (PROCEEDINGS RECONVENED)
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       THE REGISTRAR:
                       The hearing is now resumed.
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       MS. GAERTNER: Mr. Commissioner, I'm wondering if I
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could make this proposal to you? I've canvassed over the break with other counsel that are remaining to ask questions of this panel. I think we can finish the remaining counsels with the entire panel today. My questions, the remaining of them, are with the two DFO representatives and if we began tomorrow earlier, I think I'll need about 40, 45 minutes to finish my work, if we could do that tomorrow morning, then I think we could try to remain as close on schedule as possible.

I'm only going to raise a mild objection MR. TAYLOR: to the specific proposal that Ms. Gaertner raises. As to the general point, that is extending time partway through a panel, I've raised this with Mr. Martland and with others, we all get time allocations at the beginning. It's procedurally unfair to have time allocations and then change the ground rules partway through a panel. And so I raise that as a general point that I ask the Commissioner, and I have asked Commission counsel to bear in mind, and I only raise a mild objection to the specific proposal. I understand Ms. Gaertner's not finished, or not nearly so. The same is true of my questions. I left off questions and probably every other counsel would stand up and say the same thing. Mr. McDade would shout it, probably. So if there is to be any early start, or extra time for Ms. Gaertner, I think it has to be moderated, or moderate and 45 minutes on 20 minutes is not moderate.

MR. MARTLAND: Mr. Commissioner, for our part, I will simply raise this as another consideration. take from at least discussions with Ms. Gaertner, and she may wish to cover this now, that she may have concluded her questions of Mr. Last and Dr. Fleming who are on this panel. I'm not trying to pretend that we, by deferring the question, avoid the question. I will suggest, though, we have both Mr. Swerdfager and Mr. Thomson returning for other panels tomorrow and the day following. proposition I put at the outset of these hearings was that counsel do their best within the time allocations. If, at the end of the testimony of a witness they're at the point where there are necessary questions, they should then raise the issue.

I'd suggest on that footing, given that there 1 would be further time with those two witnesses in 3 the next two days, I don't pretend it's very much, but there would be further opportunities with 5 those witnesses, we're not yet at the point where 6 we need to do that. Having said that, I note that 7 the only objection is a mild one put by Canada. 8 We're not raising and I don't want to raise an 9 objection to what's being proposed. It's 10 something within your discretion as to how we may 11 proceed in that situation. 12 THE COMMISSIONER: If you could just clarify for me, Mr. Martland, I don't see Mr. Thomson's name on 13 14 the August 31st panel list; is that correct? 15 MR. MARTLAND: He is on the August -- I'm sorry, I want to make sure I get this right. Tomorrow, we have 16 17 Mr. Swerdfager returning with three fish health 18 experts. 19 THE COMMISSIONER: That's correct. 20 MR. MARTLAND: Followed by a panel that does include 21 Mr. Thomson on the Thursday this week, the 22 enforcement. 2.3 THE COMMISSIONER: But what I misunderstood perhaps was 24 your suggestion that they would be here together 25 over the next couple of days. And in fact, what I 26 see from your list is Mr. Swerdfager here 27 tomorrow, but Mr. Thomson not here until the 1st? 28 MR. MARTLAND: That's right. 29 THE COMMISSIONER: So they're not here again together? 30 MR. MARTLAND: That's true, they're not here together. 31 Inasmuch, though, as there were questions that 32 could be put to one or the other, there would be 33 time at least with each of the two within the next two days. That's right. 34 35 THE COMMISSIONER: I'm sorry, Ms. Gaertner? 36 MS. GAERTNER: Mr. Commissioner, I don't know if you 37 need to hear from me again, but I just want to be very clear that as soon as I read the Policy and 38 39 Practice Report, or our team read the Policy and 40 Practice Report and as soon as we saw the 41 materials that were filed, we put on record, we 42 sent letters to all of them that we would need

additional time on this panel that has not been

additional time and I'm making the best proposal

that I have to you in order to deal with this. I

appreciate Mr. Taylor's comments. I'm always the

provided. We can't get our work done without that

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1 last on the list and I need time on this panel. THE COMMISSIONER: Well, can I do this, Ms. Gaertner? 3 Are you finished for now, I'm sorry? 4 MS. GAERTNER: On the issue of --5 THE COMMISSIONER: No, I don't mean that. I mean where 6 are you at in your time estimate at the moment for 7 this afternoon? 8 MS. GAERTNER: Well, I think, given the debate that 9 we've just had, I've used another five minutes of 10 my time and I think that means I have three more 11 minutes to do about 40 minutes worth of work. 12 THE COMMISSIONER: All right. Well, thank you for 13 putting your position on the record, and I will 14 address this with Commission counsel as soon as we 15 adjourn today and Commission counsel will then get back to you. Thank you very much. 16 MR. MARTLAND: Mr. Commissioner, where that would leave 17 18 us is Mr. Kelliher for the Aboriginal Aquaculture 19 Association, 15 minutes or, indeed, under that. 20 MR. KELLIHER: Thank you, Mr. Commissioner. 21 22 CROSS-EXAMINATION BY MR. KELLIHER: 2.3 24 Gentlemen, I'd like to draw your attention to a 25 few documents, if I could. 26 MR. KELLIHER: Mr. Lunn, could you draw up number 5 on 27 the AAA list of documents, please? 28 Now, Mr. Last and Mr. Thomson, is this a document 29 that you're familiar with? 30 MR. THOMSON: Yes. 31 MR. LAST: I haven't seen this one, no. 32 All right. Thank you. 33 MR. KELLIHER: Might this be marked as the next 34 exhibit, please? 35 THE REGISTRAR: Exhibit 1642. 36 37 EXHIBIT 1642: A Review of First Nation 38 Comments concerning the Federal-B.C. 39 Aquaculture Regulation & NASAPI 40 MR. KELLIHER: Document number 2, please, Mr. Lunn? 41 42 Mr. Last or Mr. Thomson, is this a document that 43 either of you are familiar with?

MR. THOMSON: I've seen the document.

MR. KELLIHER: Might that be marked as the next

MR. LAST: I have, as well.

All right.

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1 exhibit, please? THE REGISTRAR: 1643. 3 4 EXHIBIT 1643: Aquaculture Development: 5 Economic Opportunity for B.C. Coastal First 6 Nations 7 8 MR. KELLIHER: Thank you. And finally document 1, 9 please? 10 This is a document headed, "Aboriginal Principles 11 of Sustainable Aquaculture." Is that a document 12 that both of you are familiar with? 13 MR. THOMSON: Yes. 14 MR. LAST: I'm familiar with the program, but I haven't 15 reviewed this particular document. 16 MR. KELLIHER: All right. Might that be marked as the next exhibit, please? 17 18 THE REGISTRAR: 1644. 19 20 EXHIBIT 1644: APSA-2010-10-01, Aboriginal 21 Principles for Sustainable Aquaculture (APSA) 22 MR. KELLIHER: 2.3 There is reference in your discussions earlier to 24 25 the notion of consultation and, as well, to 26 accommodation. Could you describe, please, for 27 the Province and for the Federal Government, the 28

- parameters of the notion of accommodation as it relates to aquaculture? Can I ask Mr. Thomson to
- deal with that issue?

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- MR. THOMSON: Well, I wouldn't purport to be an expert in it, but as I understand it, in the assessment of any action on the behalf of the Department, we assess whether there is an impact to the rights of First Nations and through the consultation approach, whether or not there is a duty to accommodate that impact to that right. In particular, I know the Department, as part of that continuum of consultation and accommodation, also
- 39 40 provides some funding through various programs, 41 such as AFS and AAROM to support First Nations' 42 involvement in those processes.
  - All right. And so could you define, if you can, in greater detail, what the parameters of the accommodation might be?
  - MR. THOMSON: I think in terms of the parameters of accommodation, it really comes down to individual

cases. So whether it's providing access for fish, or, you know, potentially, other measures. I know other governments provide different types of accommodation. The Provincial Government has provided land as accommodation measures. I think it's part of the discussion you would have with the First Nation as to what the particular type of accommodation measure would be, should an accommodation measure be warranted.

- Q Right. And the range of accommodations to date would be what?
- MR. THOMSON: Could you clarify the question and be more specific?
- Q What sorts of accommodations have been provided to First Nations in the context of the issuance of aquaculture licences to date?
- MR. THOMSON: For the issuance of the federal aquaculture licences, there's no form of accommodation that I know that have been granted, but you know, as I mentioned earlier, the accommodation or the amount of accommodation is based on assessment of whether or not there's an infringement of the rights and what can be reasonably accommodated, if there is.
- Q Right, and do you recognize the concept of accommodation having applicability in renewal of licences?
- MR. THOMSON: Again, I think that comes down to an assessment of what level of rights or infringement of rights has occurred from the renewal of the licence.
- Q All right. In the context of British Columbia, either in the issuance or renewal of aquaculture licences, has there been an assessment as to the degree of infringement of rights of any First Nations?
- MR. THOMSON: I would say we've assessed the infringement of rights, but no, we haven't done formal strength of claim type assessments.
- Q How is it that the government would be in a position to determine whether accommodation would be forthcoming absent such an assessment?
- MR. THOMSON: Our approach that we took is to limit the extent of the decision for issuance of the licences for December 19th to one year for finfish and up to 18 months for shellfish and to not to increase level of production or increase the

amount of species as a way to sort of put a hold on whatever potential infringement may have been 3 occurring as a way to start the conversation going with First Nations over the course of this year 5 and subsequent years to determine if there has 6 been an infringement of the rights for that point. 7 All right. So the assessment of the measure of 8 the right and the concomitant accommodation, 9 that's a process that's underway now? 10 MR. THOMSON: Well, I think it's a process that would 11 not only be underway now, but also ongoing sort of 12 ad infinitum as we gain more knowledge not only 13 about the industry, itself, but also, of course, 14 you know, as there's an evolving standard of 15 consultation or accommodation provided to First 16 Nations. 17 Is giving First Nations a preferential position in 18 acquiring aquaculture licences, is that a 19 consideration for accommodation? 20 MR. THOMSON: I think it certainly could be a 21 consideration for accommodation, yeah. 22 Is there any policy position adopted by the 23 federal government that in any way puts First 24 Nations in an advantageous position in respect to 25 acquiring these licences? 26 MR. THOMSON: I would say the only policy position that 27 speaks to it is the 2002 Aquaculture Policy 28 Framework which guides the federal involvement in 29 aquaculture at that time. One of the principles 30 of that policy is to support and promote the 31 engagement of aboriginals in conducting the 32 business of aquaculture. So you know, we 33 certainly have a policy direction to rather 34 support the engagement of First Nations in that. 35 All right. Mr. Last, could you answer all of 36 those questions serially for the Province? 37 MR. LAST: I couldn't. My role in government has not been specifically involved in the consultation 38 39 processes. 40 All right. Mr. Swerdfager, do you have any 41 observations, you have a vast experience in this 42 area of activity, on the concept of consultation, 43 and particularly accommodation, to First Nations, 44 bearing in mind that these activities are taking

place in their traditional territories and the

those communities? Do you have any observations

obvious economic potential that they offer to

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102 PANEL NO. 58 Cross-exam by Mr. Kelliher (LJHAH) Cross-exam by Ms. Robertson (MTTC)

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- MR. SWERDFAGER: I think Andrew has covered the topic very well. I think that the only thing I would add is that certainly, the policy stance that the Department took in terms of developing the regulation, itself, as opposed to individual licensing decisions was one where we worked very, very hard to involve both the organization that you represent and other First Nations directly in the policy development of the regulation, and the regulation is structured in such a way as to allow us to enter into arrangements that may get into the area of accommodation. We've structure the regulation in such a way as to not close any doors, maybe is a better way to put it, and to leave many open to us so that if we move down a particular trail, as Andy has outlined, we've certainly got the regulatory flexibility to do that.
- Thank you very much, gentlemen. MR. KELLIHER: are my questions, Mr. Commissioner.

THE COMMISSIONER: Thank you.

- MR. MARTLAND: Mr. Commissioner, I'm going to deal with the remaining time in, really, a backwards sequence. I have spoken with Ms. Robertson about She'd have until 3:55. The remaining five minutes before 4:00 would be, then, for the Heiltsuk, Mr. Ralston. Thank you.
- MS. ROBERTSON: Thank you, Mr. Commissioner. Robertson for the Musgamagw Tsawataineuk Tribal Council. Mr. Lunn, if you could pull up Tab 2 of the MTTC's documents, please?

CROSS-EXAMINATION BY MS. ROBERTSON:

Dr. Fleming, I'm just going to ask you a few questions about this document when it comes up. Do you recognize that document?

DR. FLEMING: Yes, I do.

This is the Convenor's Report for the Speaking for the Salmon workshop that happened in 2007 in Alert Bay, and were you attending that workshop?

DR. FLEMING: Yes, I was.

And would you agree that it was a large number of scientists from around the world who were convened to focus on the known science related to interactions between farmed and wild fish?

 DR. FLEMING: Yes, there were a large number of scientists, both national and international.

Q Thank you.

MS ROBERTSON: And Mr Lunn if you could go to

- MS. ROBERTSON: And Mr. Lunn, if you could go to page 3 of that report? And if you could just highlight that first paragraph, there. There is the Statement of Agreement, there.
- I'm just going to read that to you, Dr. Fleming.
  It says that:

European governments (Ireland, Scotland, Iceland, Norway and the European Union) have recognized that salmon farming can be hazardous to the environment, including the proliferation of sea lice on salmon farms, posing significant risk to wild salmonids.

- Now, B.C. or Canada is conspicuously missing from that last, I submit to you, and I note you made the point earlier in terms of the lessons learned that government's getting to sort of a base point of accepting risk is helpful. Would you agree with that?
- DR. FLEMING: Yes, I think that's a first step, is accepting risk.
- Unfortunately, we don't have a lot of time to delve into this so I'm just going to mark this as the next exhibit, please.

THE REGISTRAR: 1645.

EXHIBIT 1645: Speaking for the Salmon, Summit of scientists on aquaculture and the protection of wild salmon, January 25-27, 2007, Covener's Report

- MS. ROBERTSON: And if we could move on to Tab 3 of the MTTC's documents. If you could just go to the next page, please?
- So Dr. Fleming, I'm just going to read you the title of this document and ask you if you're familiar with it. The title is, "Even the Evil need a Place to Live": Wild Salmon, Salmon Farming and the Zoning of the Icelandic Coastline."
- MS. ROBERTSON: And maybe, Mr. Lunn, if we could zoom on the abstract, there?
- Q I'm just going to read on the record a sentence

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there. It's summarizing what they do in the article, it says:

> We then discuss how Iceland has sought to balance the benefits of salmon farming with the benefits of and risks to wild stock management, valuable recreational fisheries, and protection of native wild fish fauna. Under regulations enacted in 2001 and expanded in 2004, the coastline is zoned with respect to salmon cage-rearing; cage-rearing is not permitted in the bays and fjords into which the most valuable salmon rivers drain.

- Dr. Fleming, could you talk a little bit more about this based on your experience in Iceland? DR. FLEMING: I was invited in 2000, December 2000, just before I was moving to Oregon, to talk to various officials and scientists in Iceland with regards to management of salmon. They were just beginning a second expansion of a salmon aquaculture in Iceland and one of the things that they wanted to address was how to maintain or have the coexistence of a viable farming industry, as well as protect their very valuable wild salmon stocks, and zoning was one of the issues that came
  - up and we talked about extensively. And in your view, has this brought some kind of peace to the debate, or at least gone some distance to address the concerns and risks to do with protection of wild stocks in Iceland?
- DR. FLEMING: I'm not sure I could speak to what the current situation is in Iceland at the moment. probably has helped, but I don't think it has totally ameliorated all the concerns that exist. All right. Thanks.
- MS. ROBERTSON: May I mark this as the next exhibit, please?

THE REGISTRAR: Exhibit 1646.

EXHIBIT 1646: "Fisheries" pamphlet, American Fisheries Society, Volume 34, No. 10, October 2009

MS. ROBERTSON: And then, Mr. Lunn, if we could go to MTTC Tab 4, please? Now, this has already been marked as an exhibit. If we could go to page 9,

1 please? Dr. Fleming, you talked a little bit earlier about 3 your opinion on that one-kilometre distance, a siting policy, so farms are one kilometre from 5 salmon streams, and your comment as I heard it was 6 that it was somewhat arbitrary, there wasn't a 7 good scientific basis for this. Now, I believe 8 you've read this audit. Was this audit provided 9 to you? 10 DR. FLEMING: No, it was not, the details of the audit. 11 I've seen a summary of the audit. 12 Okay. Well, maybe we can just look briefly at 13 paragraph 2, there. 14 MS. ROBERTSON: Mr. Lunn, if you could highlight that? 15 So as we've noted, this is an audit of the salmon 16 regulation in British Columbia, and criterion 1 is 17 around this siting policy. That paragraph, there, 18 says: 19 20 A workshop of DFO habitat scientists noted 21 that siting criteria which have been adopted 22 in B.C. to protect vulnerable wild fish 23 stocks were not scientifically based. 24 25 And then if we could just go down to paragraph 5, 26 please, Mr. Lunn? And I'll just read that: 27 2.8 MAL concedes --29 30 That's the Ministry of Agriculture and Lands B.C.: 31 32 -- concedes that the B.C. regulation on 33 minimum distance was not determined strictly 34 as a matter of scientific investigation. 35 36 But then it goes on that: 37 38 B.C. argues no other jurisdictions have based 39 their minimum distances or exclusion zone 40 policies on scientific studies. 41 42 But then the auditor goes on to say, well, it's 43 actually documented in other countries and we've 44 heard somewhat about that, that they have, in

fact, undertaken some siting studies.

MS. ROBERTSON: And lastly, if we could please go to

page 11? Maybe just so we can see the whole page

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there? Thank you. So you'll see there that the audit score given for B.C. is one point out of 10, and the reason being that there's basically no scientific criteria for

that. Now, Dr. Fleming, if we could just look at that paragraph, there, that starts with "MAL officials," it's the third paragraph up: Where the MAL officials assert that whereas

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European salmon aquaculture countries, in these countries, there's a single migration route to the sea from salmon streams, in B.C., there's multiple channels.

Now, Mr. McDade asked you a little bit earlier, when we were comparing Norway zoning with B.C. and you were talking about the uniqueness of B.C., could you discuss that a little bit more? I'm not sure that that came out very clearly. What's the unique situation? I mean, first of all, do you agree with this statement?

- DR. FLEMING: Well, when I think mainly in terms of what's happening out in the Fraser River and the populations on the, you know, inner part of the coast, here, that they're having to travel through, a large number of salmon, a large number of salmon populations are travelling through one constricted area whereas in Norway, yes, in certain areas, they would travel through the length of a fjord, but there would be a smaller number of salmon populations passing in that area. I think one of the things with the science type of criteria that have been done, and I think they've been adopting elsewhere, is to try to look at it as a site-by-site basis, rather than a single statement as to, for instance, one kilometre, but rather an environmental impact assessment, for instance, being undertaken to assess what is the appropriate types of mitigation that should be done and in terms of licensing and locating siting.
- Thank you. And I think you were making Q Right. the point that in Norway, where you can have a fjord zone to not have salmon farms, but you have salmon coming out and then they're in the open ocean, whereas in contrast, in British Columbia --

DR. FLEMING: Yeah.

- -- where I think we have fjords, as well, in British Columbia, you have salmon coming out of fjords, because of the position of Vancouver Island, all of those salmon coming out, including the Fraser River sockeye, are going through sort of basically the same migratory corridor, which is different than Norway, because they're all being funnelled through the same channel, so to speak? DR. FLEMING: Yes. Yes, very much so on the scale of things. Thank you. And so when we're looking at this paragraph, here, this comment about MAL officials
  - Thank you. And so when we're looking at this paragraph, here, this comment about MAL officials saying, "Well, in B.C., there's always multiple channels," really, we're not really focussed on the Fraser River sockeye at that point, they're really contemplating sort of small localized streams up the coast where there may be a number of migratory channels, but the point is ultimately that the Fraser River sockeye and these smaller fish up the coast, they all do end up in the same migratory route?
  - DR. FLEMING: I presume that that's what they were thinking, but I can only presume, of course.

    Q Okay. That's fine, thank you.
  - MS. ROBERTSON: If we could just turn to page 12, please, then, of that document? If we could just highlight the criterion there?
  - Mr. Thomson, these questions are for you in my few minutes remaining. So this is Criterion 2. This assesses, here, the degree to which cumulative environmental impacts on an entire bay or other ecosystem are considered in siting decisions. Now, just in the interests of time, I note that the auditor gave five points to B.C. there on that one, and the main reason being is that he talks about the Canadian Environmental Assessment Act, and CEAA, and we've looked at some CEAA screening documents there and how they do actually consider cumulative effects as one component of their environmental screen. Do you agree with that?
    MR. THOMSON: Yes.
  - And so we've heard evidence now, what I understand is what's changed in DFO taking over the regulation of aquaculture and the licensing of aquaculture is there is no longer **CEAA**s that are going to happen through a **Fisheries Act** trigger. Basically, if you get an aquaculture licence, you

have an environment assessment, you don't need to go there any more? MR. THOMSON: Well, there may still be a trigger,

- MR. THOMSON: Well, there may still be a trigger, triggered by the Navigable Waters Protection Act licence issuance, which has really been a very common trigger for most shellfish and finfish aquaculture sites. But in developing our licence criteria and regulations and conditions licence, our intent was to take the environmental impacts associated with our mandate around fisheries and fish habitat and incorporate the screening, if you will, or the assessment of those environmental impacts into our process for licence issuance. we're trying to incorporate what was seen in the CEAA screening into our conditions of licence. But getting back to my first point, there may still very well be a triggered Canadian Environmental Assessment Act screening on the basis of the issuance of the Navigable Waters Protection Act permit.
- Q Right, and that would be contingent on an assessment of the transport officer as to whether or not there was a significant interference with navigation. So from a Fisheries or protection point of view, there really is no trigger for an environmental assessment any longer?
- MR. THOMSON: No, there isn't a trigger under the **Fisheries Act** authorization, no, which was the previous trigger that was used.
- Would you agree with me, then, the IMAP process, the Integrated Area Management Plan (sic) is what DFO was really proposing as the means to have a cumulative effect assessment, an area management approach, an ecosystem-based approach?
- MR. THOMSON: Yes.

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- Q Are IMAPs the way to do that?
- MR. THOMSON: Well, certainly from the outset of design of the regulatory process and the regulatory system that we wanted to put in place, I think we recognize that we'd like to move to a more ecosystem-based approached, as opposed to the site-by-site-based approach, even though there was cumulative effects assessed. And so the IMAP process that is in development currently is designed or is being designed to look at the aquaculture activities occurring in defined geographic areas as part of the overall management

of that area as opposed to looking at one individual site.

- Q All right. And I mean, that really, I think, would be the only process that would come into existence. It hasn't existed previously where larger migratory routes, for instance of the Fraser River sockeye, would be considered in licensing?
- MR. THOMSON: Well, certainly, I think, you know, the migratory routes of wild salmon populations, all these things had been considered in the past in environmental assessments at times. I'm not going to say in every single environmental assessment because I'm not familiar with each one, but yes, the intent of developing the Integrated Management Action Plan is we would look at ecosystem indicators within a defined area, and one of those indicators is certainly very likely to be wild salmon.
  - All right. So I mean, would you agree with me that there's a lot resting on those plans, then, being developed in terms of these larger kind of area planning processes, ecosystem-based processes?
- MR. THOMSON: I would certainly agree with you that it's a large job ahead and it's a rather ambitious direction the Department's taken, but you know, I'll say this, the current regulatory program that's in place is still a very stringent regulatory program and it requires a lot under conditions of licences.
- Q All right. So in December of 2010, it was you, I believe, who was the decision maker in issuing, I think it was 130 finfish licenses in the province?
- MR. THOMSON: I signed the licenses, yes.
- Q And they were issued for a period of one year; is that correct?
- MR. THOMSON: Yes.
- Q And that was to allow DFO time to continue to develop the regulatory regime?
- MR. THOMSON: Yeah, it was -- yes. That would be the short answer.
- Q And can you confirm that the Province used to issue aquaculture licenses for a one-year period, as the previous --
- MR. THOMSON: That would be a better question for Mr. Last.

Mr. Last, can you confirm that? 1 2 MR. LAST: Yes. 3 For a one-year period? MR. LAST: Finfish aquaculture licenses. 5 Thank you. But under the Fisheries Act, Mr. 6 Thomson, licenses can be issued for up to nine 7 years; is that correct? 8 MR. THOMSON: Yes. 9 So we're coming up to December fairly quickly 10 here, and you've acknowledged that there's a lot 11 that goes into these integrated area management 12 plans, and I mean, where are you at with those 13 plans? I'm going to put it to you that you're not 14 very far along. I've seen a draft document from 15 headquarters of July of this year sent to the Region, saying, "Here's a draft guideline for 16 development of IMAPs. Why don't you send us a 17 draft back?" So it looks like we're quite a long 18 19 ways from getting to the point where you're 20 actually going to be able to define the areas 21 where you're going to do the planning. You're a 22 long way away, aren't you? 23 MR. THOMSON: Well, I would submit that we have a 24 fairly comprehensive, though with some gap, 25 document that will start the process for an 26 integrated management aquaculture plan, however, 27 you know, I've been very clear all the way along, 28 and I think the Department's been very, very clear 29 that, you know, this is the start of a 30 developmental process so what the IMAP that's 31 developed for this year, I expect will look very 32 different from the IMAP that we have in five years 33 because what is the argument to not doing so as we 34 have a continual improvement process to develop a 35 better and better IMAP as we go forth. 36 But there's no IMAPs in existence right now, we're 37 quite a ways away from having even one? 38 MR. THOMSON: Well, I don't know how you judge "quite a 39 ways away." We will have a draft IMAP for 40 consultation this fall. 41 So come December, does it make sense to you to, 42 when you're poised to make decision to replace 43 these 130 licences, or consider replacing them, 44 does it make sense to you that you may consider 45 only replacing them for a shorter period of time 46 again, or what's your thinking on that? 47 MR. THOMSON: Yeah, it would make sense, depending on

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Cross-exam by Ms. Robertson (MTTC)
Cross-exam by Mr. Ralston (HTC)

the level of consultation and the level of our knowledge bases going forward and also, of course, with respect to the Cohen Commission, itself, and the recommendations that may come from this Commission with respect to aquaculture.

Certainly, but we've heard evidence that DFO said they're not going to issue any new licences, but there's 130 salmon farm licences, and that's really largely what we've been talking about this entire commission, I put to you so you're considering, then, not issuing them for a longer period of time again, until further work has been done on this critical area of planning that --

MR. THOMSON: Yes, that's under consideration.

MS. ROBERTSON: Thank you. I think that's my time.

MR. RALSTON: Thank you. Benjamin Ralston for Heiltsuk Tribal Council, that's R-a-l-s-t-o-n, first initial B.

## CROSS-EXAMINATION BY MR. RALSTON:

- Q Okay. Today, my questions will be for Mr. Swerdfager, as well as Mr. Thomson of DFO. With respect to the siting and licensing of fish farms, could you tell me if DFO has a protocol for consultation with First Nations that specific to aquaculture?
- MR. THOMSON: I wouldn't say we have a protocol specific to aquaculture for consultation with First Nations. We have had, in the past, guidance documents developed that provide some level of assistance in guiding our staff in conducting consultations, but I wouldn't characterize it as protocol.
- Q Okay. Is there any attempt been made at creating aquaculture-specific protocol?
- MR. THOMSON: We are receiving advice currently, both internally and with our other government agencies, as to developing such a protocol, or at least greater guidance in conducting consultations, yes.
- Q Okay. And so how much work has been done to date on that? Could you speak to the general tenor of the discussions that have been had?
- MR. THOMSON: I'm at an awkward point because a lot of the discussions and advice is coming from the Department of Justice and so I'm not really sure if that's something that I can share without

1 releasing --2 Fair enough. Fair enough. 3 MR. THOMSON: Yeah. 4 Okay. In terms of just giving general guidance on 5 what you think would make for a good consultation 6 protocol on aquaculture, now, under your Best 7 Practices Guide, information sharing is one aspect of consultation; would you agree? 8 9 MR. THOMSON: Oh, I would agree that information 10 sharing is a good practice, whether it's of 11 consultation or generally, yes. 12 Okay. So specific to consultation with First 13 Nations on aquaculture, what types of information 14 would DFO be sharing with First Nations, or have 15 been contemplated to share? 16 MR. THOMSON: Well, I think the type of information we 17 want to share with First Nations is a very similar 18 type of information we want to share broadly with the public, which is, you know, as we've been very 19 20 clear, and Mr. Swerdfager's already testified to, 21 we had a very clear objective to increase the 22 transparency around this industry so we've already 23 to start to put a great deal of more information 24 on our website than was previously publicly 25 available about the aquaculture industry. And 26 ultimately, we're going to continue to increase 27 So for example, one of the areas that I 28 think that would be useful to get into is to start 29 having a public website that shows the 30 applications for aquaculture sites so there's an 31 opportunity for First Nations and others, of

Q Okay. What about fish health data, is it contemplated that that will be shared with First Nations?

course, to understand what's being applied in

their traditional territories or the areas of

- MR. THOMSON: Well, again, on our website, we are currently posting some fish health data regarding sea lice counts and we're in the process of developing other pieces of fish health data to share publicly, as well as potentially with First Nations. I mean, First Nations being, obviously, a part of the public, as well.
- Q Mm-hmm. Will there be anything in addition to what's publicly shared, shared with an individual affected First Nation, in particular to those fish

their interest.

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1 farms in their territory? MR. THOMSON: I would think it would depend on the 3 request coming from the First Nations as to what 4 type of information they would want to be shared 5 and then, of course, the constraints of the 6 Privacy Act that we also fall under for 7 information that we receive so --8 Okay. Fair enough. Another aspect of 9 consultation is accommodation, would you agree? 10 MR. THOMSON: Accommodation can be part of the --11 Mm-hmm. 12 MR. THOMSON: -- can be part of it. 13 Okay. What type of accommodation could be reached 14 for a First Nation that is opposed to any amount 15 of finfish aquaculture in their traditional 16 territories? How could their concerns be 17 addressed? 18 MR. THOMSON: Well, I think that their concerns could 19 be addressed through a consultation process where 20 we can gain insight into the concerns they have, 21 provide advice back from our best knowledge as to 22 what we believe are the factors that mitigate 23 those concerns, or not. Talk to them about 24 potential research projects, those type of things, 25 that can be used collaboratively to address issues 26 of their concern. But you know, in terms of actual examples of what types of accommodation, I 27 28 think it really does go to, you know, an 29 assessment of whether or not there's been an 30 infringement of their rights and what type of 31 accommodation would be suitable to address that 32 infringement. 33 Okay. One more question. Would you agree that 34 First Nation often need funding in order to 35 meaningfully engage in consultation? 36 MR. THOMSON: I would agree that I've been informed 37 many a times that First Nations require funding to engage in consultations, yes. 38 39 Q Mm-hmm. Would you agree, though, that in the 40 specific context of aquaculture, which is rich in 41 science, that it's feasible that First Nations may 42 need funding to access and interpret that

I think that it would be, obviously, for

First Nations to provide advice on some of the

scientific advice or advisors would be beneficial,

scientific matters, accessing additional

MR. THOMSON:

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but you know, ultimately, when we're trying to assess the impacts of a decision, it's really the impacts to the rights of an individual First Nation and so, you know, some of that can be done through our interpretation of their telling us what impacts they've seen and are witnessing. Okay.

- MR. RALSTON: So Commission counsel's given me the sign that I'm out of time. Now, because we've only been given five minutes out of our 30 minutes requested, we had talked to Commission counsel about possibly bringing an application to have the remainder responded to in writing. I just want to put that on the record and we'll deal with that when we do. That would be it for my questions today.
- MR. MARTLAND: Mr. Commissioner, the total requests were just shy of three days for this panel. We've been ambitious, that's deliberately, and there's trade-offs to it. With respect to the point that's been in raised and, indeed, Ms. Gaertner's outstanding question with respect to the time that she sought for panel members, I don't know if we want to start into this at four o'clock with respect to our submissions. Let me suggest as a very practical matter the following. First of all, Dr. Fleming and Mr. Last, unless Mr. Ralston had a necessary question that nobody through the course of today has asked of those two witnesses, I expect those two witnesses could be excused. Both, as I said earlier, Mr. Swerdfager and Mr. Thomson, although on different panels, are returning and so in terms of whether we're adjourning until the regular time of 10:00, or 9:00, or 9:30 tomorrow, that's something that's in your discretion. I suppose, equally, if the default were the 10 o'clock, but we can communicate with participants if that time were to change. Mr. Lunn gives these daily update emails and we could communicate that immediately by email if there were a change on that. I'm in your hands with respect to the appropriate time we adjourn to at this point.

THE COMMISSIONER: Yes, I think you've got it. The latter point was the correct one, Mr. Martland, we'll adjourn now and if there's any change to the 10 o'clock start time, Mr. Lunn will so advise

participants' counsel. Thank you. MR. MARTLAND: Thank you. I'm seeking a point --MR. TAYLOR: THE COMMISSIONER: Just a moment. I'm sorry, just one moment. My apologies, Mr. Taylor, I'm sorry. MR. TAYLOR: Mr. Commissioner, I'm rising simply to seek your direction. Mr. Swerdfager and Mr. Thomson are not clearly finished cross-examination. They're coming back on other panels individually. Those are on different topics, but obviously, related topics. So in these circumstances, I'm seeking direction on what are the ground rules for speaking with the witnesses or the witnesses speaking with anyone? I'm not sure at this point whether they're still under cross on this panel, and maybe we'll hear later tonight, but we're still going to do some things in the meanwhile. And if they are under cross, what are the ground rules going to be about speaking with them to do with getting ready for the next panels? 

THE COMMISSIONER: Well, I think, Mr. Taylor, this perhaps has arisen in prior panels and my suggestion to counsel has been that with respect to matters upon which, and you're talking about a new topic that they're going to be addressing, I'm content that you be permitted, and other counsel be permitted, if they wish, if they witnesses on these panels, to address matters pertaining to that new panel without any reservation around that. In other words, counsel are free to speak to the witnesses about evidence they're about to give, they haven't given yet, and it's a new topic and they're going to be examined by participants' counsel.

With respect to matters that they've testified upon, I think my suggestion has been, and I think these witnesses have not heard it, but others have, that I've been using the usual, if I can call it that, warning that witnesses are given under cross-examination not to talk about their evidence with any party unless the court is so informed and can deal with any matters that arise. So my way of dealing with that in the past has been to say this, I'm content to leave it in your capable and competent hands, as counsel, to know that if you wish to address a matter upon which

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1 they've already testified with them, or a matter pertaining to their return to be cross-examined on 3 matters they've already testified upon, that you would let Mr. Martland know that and that between 5 you, you will sort out whether there's any need to 6 bring a matter before me for some direction. 7 quite content to leave it with you and your 8 colleagues, counsel here in the Commission 9 hearings, to sort that out with Commission 10 counsel. But should there be some disagreement 11 around the protocol for that, I'm content to give 12 a direction, but I don't have any concerns about 13 it in the absence of being told that there's some 14 reason to have a concern and, therefore, a 15 direction may be required in that context. 16 Thank you, that's helpful direction. MR. TAYLOR: THE COMMISSIONER: Okay. 17 18 MR. MARTLAND: Thank you, Mr. Commissioner, I believe, 19 then, we can be adjourned until 10:00 a.m., 20 subject to the possibility of a change in the 21 timing tomorrow. 22 THE COMMISSIONER: Yes, that would be fine. Thank you 23 very much. 24 MR. MARTLAND: Thank you. 25 THE REGISTRAR: The hearing is now adjourned until 26 10:00 a.m. 27 2.8 (PANEL NO. 58 EXCUSED) 29 30 (PROCEEDINGS ADJOURNED AT 4:05 P.M. TO AUGUST 31 31, 2011, AT 10:00 A.M.) 32 33 34 35 I HEREBY CERTIFY the foregoing to be a true 36 and accurate transcript of the evidence 37 recorded on a sound recording apparatus, 38 transcribed to the best of my skill and 39 ability, and in accordance with applicable 40 standards. 41 42 43

Diane Rochfort

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I HEREBY CERTIFY the foregoing to be a true and accurate transcript of the evidence recorded on a sound recording apparatus, transcribed to the best of my skill and ability, and in accordance with applicable standards.

Pat Neumann

I HEREBY CERTIFY the foregoing to be a true and accurate transcript of the evidence recorded on a sound recording apparatus, transcribed to the best of my skill and ability, and in accordance with applicable standards.

Irene Lim