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Order of Appearances

Northern Gateway Panel 2 - Prince Rupert

Marine Emergency Preparedness & Response

Mr. John Carruthers	Mr. Randy Belore	Mr. Jeffrey Green
Dr. Alan Maki	Mr. Owen McHugh	Mr. Greg Milne
Dr. Edward Owens	Dr. Walter Pearson	Dr. Jack Ruitenbeek
Dr. Malcolm Stephenson	Mr. John Thompson	Mr. Chris Wooley
Mr. Dennis Yee		

Examination by Ms. Carrie Humchitt for Heiltsuk Tribal Council (continued)

14828

Examination by Ms. Lisa Fong for Heiltsuk Tribal Council 15292

**Examination by Ms. Carrie Humchitt for Heiltsuk Tribal Council
(continued) 14828**

Preferred means of fishing

Upon confirmation that the panel wasn’t familiar with the term, “*preferred means of fishing*”, Ms. Humchitt explained that it refers to the Three Jacks Aboriginal rights case, which ultimately stated First Nations’ rights to preferred means of fishing, and access to

customary fishing places. She asked if the panel was aware that it had suggested that First Nations travel distances, contrary to their preferred means of fishing within their territory.

Mr. Greene answered that the panel was aware of the some case law regarding First Nations fishing rights. He explained that NGP intends to not have spills, and that routine operations should not affect First Nations in this way, noting that community response plans and compensation would be used to address effects to traditional harvesting in the event of a spill. 14837

Ms. Humchitt sought confirmation that some forms of compensation cannot cover cultural impacts of a spill. Mr. Green spoke about NGP's intentions to protect sensitive areas in the event of a spill. 14839

The potential use of Shearwater for an emergency response facility

Mr. McHugh confirmed that NGP has considered using Shearwater for emergency response, noting that the location is currently used for equipment storage and as a BC Ferries terminal. Ms. Humchitt asked if the Panel was aware that using Shearwater for such a facility would require a formal referral process through the Heiltsuk Tribal Council. Mr. McHugh responded that NGP would plan to have discussions with communities over their plans for the facilities. 14842

Ms. Humchitt asked what alternates were planned if Heiltsuk Council doesn't approve the use of Shearwater. Mr. McHugh mentioned NGP's belief that such facilities would be beneficial to communities, but that there is much Crown land in the area that could present alternative options. 14851

Discussion on the subject continued and Mr. Carruthers spoke about potential employment opportunities from the emergency facility. Mr. McHugh confirmed that NGP would intend to provide emergency response training and funding for communities that choose to participate in response plans. 14853

Impacts of the Exxon Valdez spill

Mr. Wooley confirmed for Ms. Humchitt that he was aware of the Exxon Valdez spill being referred to as "the day the water died" by some Alaskan natives. She asked if he was aware of the impacts to Alaskan natives' subsistence patterns for years after the spill, because of fears of contamination to traditional food sources. Mr. Wooley confirmed that he was aware of the matter and pointed to [Exhibit B83-17](#), Adobe 256, which describes the impact of litigation on people's perceptions of the effects of the spill. He noted that the speech from which "the day the water died" came, was used to influence people's perceptions on the matter. 14863

Ms. Humchitt pointed out a different source of the original statement, and discussion continued around social anthropologist Nancy Yaw Davis's work with communities following the Valdez spill. 14880

Mr. Carruthers pointed out NGP's recognition that "a spill would be negative" and spoke about the intention to work with communities to formulate spill response plans.

Discussion continued on the polarizing nature of litigation and the resulting stress on First Nations. 14889

Ms. Humchitt asked if the witnesses were aware that Alaskan natives reported scarcer resources following the spill. Mr. Wooley answered that the Fish and Games Subsistence Division numbers showed reductions in resource harvestings. He stated that deer were not affected by the spill and that “within three years after the spill, the harvest had resumed essentially to pre-spill levels.” 14894-14898

Ms. Humchitt asked if NGP was aware that impacts to species affect other species, which First Nations depend on for subsistence consumption. Mr. Wooley answered that NGP recognizes “that spills can have an effect on harvest patterns”, and mentioned NGP’s community planning process. He explained that subsequent oil spills have seen much greater success with regards to protecting human health and safety, and cultural and community resources. 14901

Dr. Ruitenbeek added to his colleague’s comments, speaking about the compensation regimes related to socio-cultural and economic impacts. Mr. McHugh spoke about the already existing tanker traffic in the area, stating that NGP’s proposed response planning could benefit Heiltsuk Nation in regards to risks that already exist along the coast. 14909

Ms. Humchitt turned the conversation towards spill impacts on fish spawning areas. She brought up evidence showing that herring eggs suffocate when exposed to oil. Dr. Pearson provided information on the impacts of oil exposure to fish eggs and spoke about previous spill locations in relation to spawning grounds. He explained that following the Nestucca spill, herring spawning sites changed, presumably to avoid the oil. 14916

Cultural genocide as an effect of an oil spill

Ms. Humchitt asked about Mr. Wooley’s comments from [Volume 142](#), starting at paragraph 14662. Mr. Wooley clarified his comments, differentiating genocide from an oil spill, noting that genocide involves an intentional destruction of an ethnic group. He suggested that the Alutiiq people of Prince William Sound adjusted to the impacts of the oil spill, just as they had adjusted to various other obstacles throughout history. 14937

Ms. Humchitt asked about NGP’s inclusion of Aboriginal people to inform traditional land use studies. Mr. Green answered that Aboriginal people had been involved in many of the biological studies. Discussion continued on the Proponent’s approach to incorporating First Nations views on cultural impacts of spills. Mr. Carruthers again spoke about First Nations participation in the community resource plans. 14950

Ms. Humchitt asked about the consideration of psychological impacts to First Nations when prevented from accessing traditional foods, in the human health risk assessment. Mr. Green answered that the assessment only looked at direct health effects from exposure to hydrocarbons. Ms. Humchitt asked if NGP would conduct a study on the subject. Mr. Wooley pulled up [Exhibit B83-17](#), Adobe 103 and talked about the difficulty of quantifying such effects, and the potential to address subsistence effects in the planning process by incorporating local knowledge. Discussion continued. 14958

Ms. Humchitt asked if Enbridge was aware of “considerable stress in the Heiltsuk Nation and coastal First Nation communities... in anticipation of a possible spill”. Mr. Carruthers answered, “yes, we understand that.” 14976-14977

Impacts to medicinal plants and the Great Bear Rainforest

Ms. Humchitt asked about the witnesses’ awareness of the presence of traditional medicines near shorelines that would be impacted by an oil spill. Mr. Wooley acknowledged First Nations cultural reliance on plants but stated that in his experience, oil spills do not extend beyond upper intertidal zones. 14978

Ms. Humchitt asked if the witnesses were aware of the potential impacts of an oil spill on sensitive ecological areas along the tanker route, such as the Great Bear Rainforest. Mr. McHugh answered that it is unlikely that a spill would impact the Rainforest; that it could be possible given the right conditions, but that such impacts “would be probably limited to shoreline style impacts, not upland with into the forested area.” 14986

Ms. Humchitt asked about tides carrying spilled oil great distances, and Mr. McHugh agreed that oil could be carried to the region of the Great Bear Rainforest. Discussion turned to Kermode bears in the region and their dependence on salmon. Mr. McHugh talked about the remote and small probability that an oil spill would impact salmon and Kermode bears as a result. He pointed to NGP’s “extensive response capacity” to address the concerns Ms. Humchitt was raising. 14989

Mr. Wooley added comments about naturally occurring oil, pointing to the Alaska Peninsula where, he explained, brown bears are seen feeding in streams adjacent to natural seeps of oil. 15004

Consideration of Environment Canada’s recommendations

Ms. Humchitt asked if NGP would follow Environment Canada’s recommendations with regards to including a worst-case scenario in their models. Mr. McHugh answered that NGP had committed to working with EC on the detailed spill response planning process and the Scientific Advisory Committee to expand on the spill scenarios and look at various response strategies. 15008

Ms. Humchitt asked if Mr. McHugh’s response meant that NGP would not be considering EC’s recommendations and Mr. McHugh indicated that the application already includes “credible worst case discharges.” Discussion turned to the differing perceptions of “worst case”. 15018

Fossil fuels as naturally occurring, and the environment’s capacity to absorb spills

Noting cancerous elements in marine life following the Valdez spill, Ms. Humchitt asked how NGP would mitigate such contamination in the event of a spill from its operations. Dr. Maki spoke about his research experience and the fact that there is a lack of proof that oil causes cancer in fish. He continued to explain that fossil fuels are naturally occurring and that the environment has mechanisms to breakdown, assimilate and re-incorporate spilled oil into bacterial biomass, meaning that long-term effects are unlikely. He spoke

about human health impacts of synthetic materials and cited Paracelsus's famous line, "the dose is the poison". He also explained that large spills can cause smothering and toxicity effects, but that these are short-term effects. 15025-15041

Compensation to Aboriginal people from spill impacts on fish

Ms. Humchitt noted that Aboriginal populations downstream of tar sands areas in Alberta had been unable to harvest fish because of impacts from tar sands productions. She asked if Enbridge had compensated First Nations around Lake Athabasca for cultural impacts. Ms. Humchitt was asked to pose a question relevant to the witnesses' evidence. 15062 Ms. Humchitt asked if NGP would compensate First Nations for cancerous impacts to foods resulting from spills. Dr. Stephenson answered that NGP's [Ecological and Human Health Risk Assessment](#) indicates that risk levels to food from oil spills would be negligible and that significant cancer risks would not be a concern. 15068

Mr. Green spoke about NGP's commitment to environmental qualities by establishing baselines of current contaminants in the region, to compare with in the event of a spill. He pointed out that the Government would be responsible for closures and advisories. 15077

Dr. Ruitenbeek spoke about the principle of compensation and indicated that, based on baseline studies, if connections between spills and contaminations were made, compensation claims could be made. He reiterated previous statements about the unlikelihood that a spill would result in contaminant levels of concern. He added that ship owners have insurance and that Governments have compensation mechanisms. 15081

Archaeological impacts from spills

Mr. Wooley confirmed for Ms. Humchitt that NGP is aware of the number of archaeological sites around Heiltsuk territory and that many of the sites haven't been documented. She asked if NGP was aware that radiocarbon dating of the sites would be impacted by a spill. Mr. Wooley explained that radiocarbon assessment of samples from the Exxon Valdez spill didn't show any effects from the spill, and that the samples could be cleaned before assessment. Discussion continued. 15091

Mr. Green indicated that an archaeologist would be a member of the shoreline clean-up advisory team, and that clean up would have to comply with legislation around archaeological sites. Ms. Humchitt asked if NGP would consult with Heiltsuk's Culture and Heritage Department regarding potential impacts in its territory. 15110

Discussion on the subject continued. [Volume 64](#), at paragraph 11642 was brought up and the subject was further explored. Mr. Wooley again stated that the planning process would ensure protection of sites in future spills. 15113

Ms. Humchitt pointed out that bitumen oil may contaminate archaeological sites differently than what was observed in the Exxon Valdez spill. Mr. Belore indicated that bitumen would likely behave similarly to the Alaskan slope crude from the previous spill, but that it may have less potential to penetrate into sediments because of higher viscosity. Ms. Humchitt asked if there had been research on the subject and Mr. Belore answered

that he wasn't aware of any on dilbits, but that in general research has shown higher viscosities result in less potential for penetration into sediments. 15136

Dr. Maki explained that there are other means of dating archaeological sites, and pointed out that much radiocarbon dating has shown contamination from naturally occurring organics. He talked about changes in the methods of dating and added that NGP would use Aboriginal input on the matter. Discussion continued. 15145

Dr. Owens added that the greatest damage to cultural sites is from clean-up activities, not oil itself, indicating that it is important to prevent clean-up crews from working in sensitive areas. Discussion continued and Dr. Owens described details of the shoreline clean-up assessment team procedures. 15156

Discussion continued with the witnesses speaking about their experiences with archaeological site clean up and the consideration of First Nations input on the matter. See transcript for greater detail. 15167

Funding cuts to DFO and the Canadian Coast Guard

Ms. Humchitt noted the lack of traditional land use studies and asked if NGP had concerns about recent DFO funding cuts, which could impact their ability to work with NGP in an effort to provide information on fisheries along the tanker route. Mr. Green answered that it isn't up to NGP to determine DFO's service levels, and stated that NGP would work with the Department on fisheries-related research. Discussion continued. 15188

Ms. Humchitt asked what type of participation NGP anticipated from the coast guard in regards to emergency spill response. Mr. McHugh answered that the coast guard is responsible for monitoring the completion of a spill response. Discussion turned to recent funding cuts to the coast guard in BC and Mr. Carruthers pointed out that NGP would have response capacity independent of the coast guard. 15201

Differences between diluted bitumen and conventional crude in spills

Ms. Humchitt asked if NGP would consider refining its oil products as a mitigation measure for spill response. Mr. Carruthers answered that Enbridge doesn't refine products, but ships them, and that its pipelines have the capacity to carry various products. Discussion continued on the degree of knowledge on conventional oil as opposed to dilbit. 15212

Dr. Owens agreed that there hasn't been a diluted bitumen spill in open water and stated that although such a spill would be unique, "It's sort of like having different flavoured yogurt...they may have different colours and consistencies but it's still that same material." 15223-15227

Ms. Humchitt asked how NGP could predict the behaviour of spilled oils given that there will be various mixtures carried. Mr. Belore answered that NGP had looked at the behaviour of dilbit products and their similarity to fuel oils that are blended similarly. He stated "the record clearly shows that these diluted bitumen products will not behave very

differently, they'll behave very similarly to these intermediate fuel oils and heavy fuel oils." 15239-15241

Mr. Milne added his thoughts that each spill is unique but that having robust response capabilities to understand and respond to incidents is key. 15246

Discussion turned to previous lab studies on the behaviour of dilbit. Mr. McHugh again spoke about plans for the Scientific Advisory Committee. He confirmed for Ms. Humchitt that the Committee would have a seat for First Nations. Discussion continued on how many seats should be given to First Nations representatives with Mr. McHugh pointing out that the Committee would be a technical working group, so one seat is appropriate. 15250

Ms. Humchitt asked if NGP is prepared to conduct a comprehensive spill response exercise in realistic confined channel and open water conditions, on a regular basis. Dr. Owens responded that NGP planned to have a more robust and frequent drill and exercise program than what the *Canada Shipping Act* requires. 15269

Ms. Humchitt asked why NGP wouldn't have evaluative measures, such as spill response planning, undertaken prior to approval of the project. Mr. McHugh answered, "this project has done more work than we're aware of any other project doing at this stage of a project approval process." He added that the commitments that have been made will require extensive work and that this is the typical approach in the NEB process. 15275

On Heiltsuk views of the Project

Mr. Carruthers confirmed that NGP is aware of Heiltsuk's declaration against the project. Ms. Humchitt asked if he was aware that the Nation "considers itself a sovereign nation with land and waters unceded by treaty or agreement and that any oil tankers coming into our territory are an act of trespass." Mr. Carruthers answered that he was uncertain of legal interpretation but that NGP was looking to use already used marine traffic routes. 15282-15285

Examination by Ms. Lisa Fong for Heiltsuk Tribal Council 15292

On spill insurance claims

Ms. Fong asked about the average time for accessing IOPC insurance and Mr. Ruitenbeek provided general details of various insurance protocols for oil spills, including the IPOCF, the Ships Source Pollution Fund (SSOPF) in Canada, and private insurance for ship owners, noting that settlement processing time depends on the case. He noted a large spill on the east coast that was settled within a year and a half. 15298

Dr. Owens spoke about his experience, stating that claims offices are generally set up quickly, adding, "certain specific payments can be made onsite if those are deemed to be appropriate and needy claims. Discussion on the matter continued. 15304-15305

Discussion continued on the various timelines required for insurance settlements. The witnesses indicated that SSOPF claims take an average of 5 months, while IPOCF claims

can take 6 years from the time of a spill. Discussion continued on insurance claim processes and timelines. 15306

Ms. Fong asked about measures to ensure that people have the capacity to access insurance claims, noting that corporations filing insurance claims have large teams of experts filing claims, whereas communities and individuals often don't have such capacity. Mr. Carruthers spoke about the process, noting that onsite assistance would be available for claim applications. 15339

Ms. Fong asked if there could be delays in a claim if there were disagreements from the SSOPF regarding a ship owner's liability. Dr. Ruitenbeek indicated that such a disagreement would not delay SSOPF funding. Discussion continued on payment processes and risks of clawback on advances paid out from insurers. 15368

Ms. Fong asked if tanker insurance applies outside Canada's Exclusive Economic Zone. Dr. Ruitenbeek answered that the IOPCF is international and the SSOPF covers ship-based spills affecting Canada. He indicated that P&I insurance covering tankers also applies in international waters. 15416

Response times for initial containment and recovery operations

Ms. Fong called up [Exhibit B3-37](#), Adobe 33, noting the document states there will be a 6-12 hour response time in the CCAA, with open water response times still being worked out. She compared that information with [Exhibit B41-16](#), which she interpreted to suggest a 12-hour response time in the open water area. She asked if the open water response time was in fact still being established. Mr. McHugh indicated that NGP has proposed to have a 6-12 primary response time in addition to whatever time is required to travel to the open water area. 15425

Discussion the subject continued. Ms. Fong asked if maps would be available indicating response times for particular areas and Mr. McHugh indicated that such maps wouldn't be helpful, explaining that further details would be determined through detailed oil spill response planning. He also stated that discussions with Transport Canada would provide further guidance on primary response areas. 15443

Ms. Fong asked how weather variability is considered in the given response times. Mr. McHugh spoke about various travel speeds depending on conditions. Discussion continued and Mr. McHugh again stated NGP's interest in working with communities to establish participation with regards to response bases along the coast. 15464

Discussion continued on various response locations and resources available for response planning. Mr. McHugh indicated that offshore infrastructure could also be used, such as moored barges. Mr. Carruthers again spoke about benefits to communities in terms of capacity building, and potential employment opportunities from response centres. 15479

Ms. Fong asked who would own the major response centre. Mr. McHugh indicated that a private organization would own and operate the centre, and that NGP hoped for participations from communities. Ms. Fong asked about NGP's involvement with the response centres and Mr. McHugh indicated that a separate response organization would

be contracted to meet the standards that NGP has set through its marine oil spill response plan. He stated that various parties can review the plan and that Transport Canada would “typically” review the plan on a 3-year cycle. 15517-15535

Discussion around the response centre and ownership of equipment and operations continued. Mr. McHugh indicated that ownership or management of the centre could change through time and that a number of organizations from around the world, including Western Canada Marine Response Corporation, would be considered for the contract. 15536

Ms. Fong asked if funding had been allocated for equipment caches at various open water area sites. Mr. Carruthers answered that funding “is not the issue”, and that NGP’s commitments would be available throughout the lifetime of the project. 15542

Ms. Fong asked if the same commitments would be made for tertiary response centres and Mr. McHugh explained that the tertiary sites would be an “above and beyond” initiative, which NGP would seek to fulfill through partnerships with other stakeholders along the coast. Discussion continued as to whether or not NGP would commit to funding for tertiary sites. 15544