Enbridge Northern Gateway Project
JRP Hearing Notes

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Contents

Order of Appearances

Enbridge Northern Gateway Pipelines Panel #3

Pipeline Operations, Emergency Preparedness & Response Panel

Mr. Kevin Underhill	Mr. Allan Baumgartner	Dr. Frank Bercha
Mr. Dale Burgess	Mr. Barry Callele	Mr. Ray Doering
Mr. Jeffrey Green	Dr. Matthew Horn	Mr. Walter Kresic
Mr. Greg Milne	Dr. Jack Ruitenbeek	Dr. Malcolm Stephenson
Dr. Elliott Taylor		

Examinations

Ms. Brenda Gouglas for the Fort St. James Sustainability Group 17457
Ms. Candace Kerr for the Fort St. James Sustainability Group 17827
Mr. Nathan Cullen, MP, Skeena-Bulkley Valley 18286

Mr. Jesse McCormick for the Haisla Nation 18819

Examination by Ms. Brenda Gouglas for the Fort St. James Sustainability Group 17457

Pipeline Oil Spill Response Plan

Ms. Gouglas confirmed that the Pipeline Oil Spill Response Plan for the Northern Gateway Pipelines (Section 5.1 of Exhibit B3-20) "will not be completed until after approval of the project, but before operation of the pipelines." Mr. Milne replied, "The preparation of the … Plan is a longer term process and so it's been underway for a few years now and it will carry on until … six months before the operation of the pipeline, at which point, it will be provided to the regulators."

Mr. Underhill explained that a General Oil Spill Response Plan (GOSRP) (Exhibit B21-2) is being prepared. "It is the first step that will lead us also to preparing additional plans, more detailed plans, that will be associated with the terminal as well as the terrestrial pipeline." He confirmed that the GOSRP will also be finalized after approval, but before operations. 17471

Ms. Gouglas asked some questions about the relationship and interdependencies between the GOSRP, Book 7 (Enbridge's emergency response plan is contained in Book 7 of its Operating and Maintenance Procedures, which is being revised and will be resubmitted to the NEB and PHMSA in January 2013.), and the NTSB's (Exhibit B92-3) recommendations following the Michigan spill. What were the lessons learned? 17493

Mr Underhill said, "Going forward our philosophy for any response is to over-respond. We've undertaken capability reviews of our equipment and augmented our equipment."

Incident command & unified command

Mr. Underhill said, "We've always operated under the incident command structure but (prior to Michigan) we hadn't been in a position before where we operated under a unified command structure which included other regulatory agencies that also were involved in the response." 17503

Response organizations

Ms. Gouglas asked about equipment and personnel. She listed four response organizations and asked where they are based. Mr. Milne replied, "Don't know", Eastern Canada, Greater Vancouver area, Calgary. Then she asked where the response will come from for a spill in the vicinity of Fort St. James. 17525

Mr. Underhill said the pump station will be manned 24/7, so that would be the initial response. Prince George, Terrace, and if necessary, augmented from further away.

Ms. Gouglas noted the NTSB's comments about spill contractors being unable to deploy immediately and being over 10 hours away. She asked about response times, and what experience NGP has with any of the response organizations. Mr. Underhill is unable to reply with any details, or even the correct name of one response organization. 17539

Stuart River

Ms. Gouglas described attributes of the Stuart River, its fisheries values for salmon and sturgeon, its provincial heritage status, the provincial park. She questioned about similar pipelines crossing similarly significant rivers, and she asked for a detailed description of a response plan specific to the Stuart River. Mr. Underhill referred her to the Kitimat Valley spill response plan, but could not provide one yet for the Stuart River. 17553

She is concerned about the 49.3 km distance of the response control point from the proposed crossing, citing the NTSB's note that Enbridge's initial efforts were concerned "with the placement of oil containment measures … many miles from the release site, [which] could have been put to better use … much closer to the release." Dr. Taylor responded that it is a preliminary site, and subject to revision, and the addition of other control points, based on groundtruthing, consultation, and more detailed planning. 17572

Ms. Gouglas had other questions about which of the witnesses had actually visited the Stuart River crossing site, about the provincial park and the crossing location.

She asked about the Norman Wells spill, which was undetectably small, but over time is estimated to have leaked 1628 barrels (258 m^3, 258,000 litres). When was it last inspected? Mr. Burgess: "within the last two weeks before the discovery." Mr. Callele said that they are looking at two different inline inspection products which might be able to detect pinhole leaks. 17647

Ms. Gouglas asked about crossing watercourses along the right-of-way in different seasons, including the possibility of building bridges. Mr. Green said some of these issues are addressed in an undertaking, U-43, which they expect to have ready tomorrow. 17709

Pipeline integrity

Ms. Gouglas asked, "Could you tell me what is lacking in Enbridge's integrity management programs that continues to lead to pipeline failures with the immediate cause of metal loss and cracking demonstrated as recently as July of this year? And can you also tell me how integrity management for the proposed Northern Gateway Project will be different?" 17744

Mr. Kresic said that industry has had great success with respect to metal loss. Crack management is "newer" in the industry – technologies for inspecting pipelines have been around for 15 years versus 30 or more for corrosion. But, "we deal with what's viewed to be rare events. I know they don't sound rare when they occur on the news but the statistics that we work with are very, very, small numbers."

Examination by Ms. Candace Kerr for the Fort St. James Sustainability Group 17827

Emergency Notification Tree & no discussion with local responders

Ms. Kerr explained that she lives within one km of the Fort St. James pump location. She asked about the Emergency Notification Tree (Exhibit B21-2). Her first questions related

to the role of local responders – police, fire – and she determined that no discussions have yet taken place with local responders, or municipal and regional governments.

Ms. Kerr focussed on the second sentence (from Exhibit B41-18): "Northern Gateway will become a significant property tax contributor within the Regional District of Bulkley Nechako. It is assumed that some portion of this tax revenue will be directed to the provision of emergency response services within the District of Fort St. James." Mr. Underhill's reply did not explain what was meant by the second sentence.

Mr. Underhill also confirmed that no discussion has taken place yet with provincial government officials, and there is no undertaking with respect of funding or compensation to provincial emergency programs. 17886

Pump stations

Ms. Kerr had a series of questions about pump stations and staffing, and the roles of local emergency responders. 17092

Freezing rain & cancelled helicopters

Quoting from an Aid to Questioning (AQ) on the Norman Wells spill, "Due to inclement weather, helicopter travel and correspondingly site activities were suspended," Ms. Kerr asked what the "inclement weather" was. Mr. Burgess replied, "freezing rain." She asked, "Given that we have freezing rain in Quesnel today, could that same kind of weather also halt cleanup activities on the Northern Gateway Pipeline?" Mr. Burgess replied that there are other ways to reach sites in the Fort St. James area. 17932

Ms. Kerr's questions elicited more information the Norman Wells pinhole leak, about leak detection methods, and that they tend to be associated with "pre-1970s electric resistance welded pipe."

Site remediation & compensation

Ms. Kerr asked about the statement in Exhibit B3-20 that following a spill, "Effects would be reversible and the affected land would likely be usable […] within a year." Mr. Underhill spoke about site remediation and the role of the NEB. Ms. Kerr asked, what happens if the land is not usable within a year? Mr. Underhill mentioned "engagement of various stakeholders' and compensation, which would include a release of NGP from further claims or responsibility. 17986

Ms. Kerr was concerned that NGP may be treating lands within the Agricultural Land Reserve (ALR) differently than lands used for agricultural purposes which are not in the ALR. Mr. Green assured her that is not the case. 18017

She also asked what defines a residential area, and is referred to ERCB Directive 38 and Volume 6A of the Application, Section 5, Table, 5.2. Her concern was with the proximity of pump stations, and specifically confirming that the Fort St. James pump station is the nearest to an occupied dwelling of all the stations on NGP. 18035

Risk Intensity Maps

Ms. Kerr put up the "risk intensity map" of the Fort St. James pump station (Exhibit B113-7). Dr. Bercha provided an informative introduction to these maps. 18093

One in a million

Ms. Kerr confirmed with Dr. Bercha that 1 in 1,000,000 is an acceptable probability of death, and that this is a threshold which has been accepted by the NEB. 18148

Spill modelling

Bringing up Exhibit B141-2, a hypothetical full bore release map from Pitka Creek and into the Necoslie River, in Fort St. James, Ms. Kerr asked why the oil stops at the Stuart River bridge. Dr. Horn replied that that was as far as the oil was allowed to travel unmitigated for 12 hours. The model stopped after 12 hours because it's assumed that there would be a response at that point. The model did not include winds. 18175

Spill from decommissioned pipeline

Mr. Doering said that a pipeline must be purged of hydrocarbons when decommissioned. Ms. Kerr asked whether NGP "is doing some planning around the potential for a spill from the abandoned or decommissioned pipeline?" NGP's Mr. Langen complained about the question, but the Chairperson said that the Panel would like to hear the answer. Mr. Underhill replied that essentially the procedures would be unchanged from an active pipline, except "the volume would be very minimal."18226

Examination by Mr. Nathan Cullen, MP, Skeena-Bulkley Valley 18286

Properties of dilbit in water

Mr. Cullen confirmed that the density of diluted bitumen is 0.94. Dr. Horn said, "There are many processes that can happen in the water column that can increase the density of the oil." These include evaporation of the "lighter ends," weathering, dissolution.

Mr. Cullen introduces as an AQ a material safety data sheet (MSDS) from Imperial Oil. Dr. Horn says that MSDS are typically used by workers that are handling products, and are not very specific on physical and chemical properties.

Exhibit B16-31, the "Confined Channel Assessment," is a study of weathering and behaviour of dilbit. Dr. Horn said that density and flow, and viscosity, are the largest characteristics.

Dr. Stephenson added that the density of 0.94 is a tolling standard that limits the products acceptable in NGP. The density range in the MSDS (0.9 – 1.2) would not be permitted.

Cleaning up outside the lab

Mr. Cullen asked, "[With respect to the] cleanup technology that is proposed by the Proponent, has it been applied in real terms, I mean outside of the laboratory or modelling, to fast-moving, high-gradient, cold northern rivers?" Mr. Underhill's reply was general, so Mr. Cullen asked again if the company had any experience doing a

cleanup operation in these specific environments. Mr. Underhill acknowledge that it does not have that direct experience, but does draw on the experience of others. 18471

Mr. Cullen asked if there is a goal to return the environment to a pre-spill state. "Is there a standard?" "Who signs off?" Mr Underhill referred to the NEB process they have to follow and guidelines which "refer to bringing the situation back to its former capabilities." Are these binding objectives? Dr. Stephenson mentioned the Fisheries Act and habitat provisions.

How is the goal affected by the amount of bitumen that enters the water column? Mr. Underhill said the initial response is getting the bulk of the surface oil, and then on to submerged oil. Mr. Milne said these could happen in parallel. There comes a point where a decision must be made about harm versus benefit in capturing more or all of the oil. Those decisions are not made by NGP alone. 18500

Who makes the decisions?

Mr. Cullen asked some questions to determine who is involved in decisions to continue, change or abandon a spill recovery effort. How is this done? When? The witnesses provided a general reply. Are communities and First Nations involved? Mr. Underhill said, "Depending on the circumstances, yes" 18530

Exhibit B38-2 contains the statement, "The ALARP principle is that the residual risk to the environment following clean up shall be 'as low as reasonably practical.' …Examples of qualitative and quantitative cleanup endpoints that may be considered ALARP, for shoreline cleanup include: no visible surface oil; no oil/oiled debris that could contact/effect wildlife; no oil on >30% of vegetation stems; and no oil over 0.01 cm thick and >30% coverage on bedrock." The discussion which follows is informative. 18557

Impacts on salmon and salmon habitat

"Have there been assessments done by Enbridge in terms of the impacts on salmon-bearing streams and on those salmon populations?" Dr. Stephenson referred to the ecological and human health risk assessment study. Dr. Taylor said that more of this will be done during the detailed planning process. 18578

Mr. Cullen asked, "[At] what stage does that detailed planning process happen?" Dr. Taylor replied, "It happens as soon as we know that there's a project to move forward with." 18594

Landslides & earthquakes

Mr. Cullen pointed to evidence filed by another intervenor (Exhibit D13-2-2) which states that the frequency of large landslides has increased and is likely to continue. "Does your proposal … as it is presented right now take into account earthquake events similar to the one that we had on the weekend?" Mr. Doering replied, "The event west of Haida Gwaii on the Queen Charlotte fault falls well within the seismic range of activities that we would anticipate for the design of the project." "This particular event was probably about 10 percent of … the design event that we would design facilities for at the Kitimat Terminal." 18633

Spill response and the NGP relationship to Enbridge

Mr. Cullen asked if Enbridge would be providing resources – equipment and human resources – for NGP's spill preparedness and response? Mr. Underhill said, "Certain equipment, yes; emergency response capabilities, yes." 18728

EPA "disapprovals" and public relations trumping regulators

Mr. Cullen quoted the EPA (Exhibit D66-4-37) regarding spill response plans submitted by Enbridge five days after the Michigan spill: "U.S. EPA disapproves of each of these plans due to deficiencies in content and technical details." 18742

He then said, "The National Transportation Safety Board noted in its review of the response to Kalamazoo spill that 15 minutes prior to contacting the regulatory authority of notice of the spill Enbridge contacted its public relations department in Houston. Is this a standard procedure?" (Exhibit B92-3) When asked for the specific reference by Mr. Underhill, Mr. Cullen said he will pull up the document later. 18753

Industry benchmark for pipeline safety

Mr. Cullen quoted from transcript Volume 94 for October 19, 2012. "The industry does not have a benchmark for pipeline companies to compare to. If you look around the world for what defines a safe pipeline there's maybe two countries in the world that have any sort of national code for pipeline safety. The U.K. and the Netherlands. North America doesn't have that." 18788

Mr. Kresic's explanation began, "The reference at that time spoke to what sort of benchmarks exist for comparing one risk assessment against another… My point was that there is no absolute number for describing a probabilistic assessment, all of the numbers are based on some sort of relative comparison to some other facet of life."

Examination by Mr. Jesse McCormick for the Haisla Nation 18824

Spill Return Period for Physiographic Regions and the SQRA

Mr. McCormick put up Table 3-2, Spill Return Period for Physiographic Regions in Exhibit B3-20 and asked if the data had been superseded by the revised Semi-Quantitative Risk Assessment (SQRA) (Exhibit B75-2). Mr. Kresic said the two risk assessments are for two different purposes. This table "is being used by the environmental assessors to identify how to apply environmental mitigants along the pipeline. … The SQRA … is … so that the pipeline designers can select the materials."

Mr. McCormick asked a number of questions about Table 3-2 and the SQRA, about the data used in each, and the continuing value of each. Mr. Kresic stated that NGP has an undertaking to provide an updated SQRA. Mr. Green said that the physiographic regions in Table 3-2 are less useful than the km-by-km information in the SQRA. In answer to Mr. McCormick's question, "Is [Table 3-2] no longer be relied upon," Mr. Green says the table is still useful for its original intended purpose. 18836

Mr. McCormick will ask in writing for an undertaking for NGP to prepare a revision of Table 3-2 which includes the physiographic regions, and 50-year probablilities of a spill.