

ENVIRONMENTAL ASSESSMENT OFFICE

PROPOSED WESPAC TILBURY MARINE JETTY PROJECT Working Group #3 Meeting

Summary Meeting Notes

Thursday February 4, 2016
9:30 am – 4:00 pm

Meeting Participants:

Provincial Government

Lindsay Walton, EAO
Michael Shepard, EAO
Teresa Morris, EAO (Victoria)
Qinghan Bian, Ministry of Environment – Climate Action Secretariat (CAS) (dial-in)
Drew Frymire, Ministry of Forests, Lands and Natural Resource Operations (FLNR) (dial-in, afternoon only)
Tami Fur, FLNR (dial-in, morning only)
Levi Timmermans, Ministry of Transportation and Infrastructure (dial-in)
Marc Chawrun, Oil and Gas Commission (OGC)
Goran Krstic, Fraser Health (FH)
Michelle Murti, FH (dial-in, afternoon only)

Federal Government

Lindsay Funk, Canadian Coast Guard (CCG) (presenter)
Shona Smith, Department of Fisheries and Oceans (DFO) (dial-in)
David Leung, Environment and Climate Change Canada (ECCC)
Andrew H, ECCC – Canadian Wildlife Service (CWS)
Melissa Lucchetta, ECCC
Mike Armstrong, Fraser River Pilots (FRP) (presenter)
Lucille Lukey, Health Canada (HC) (dial-in)
Jessica Coulson, Natural Resources Canada (NRC) (dial-in)
Brian Young, Pacific Pilotage Authority (PPA) (presenter)
Bob Gowe, TC (presenter)
Catherine Galbrand, TC
Colin Parkinson, TC
Paula Doucette, TC (dial-in)
Chris Wellstood, Port Metro Vancouver (PMV) (presenter)
Egge Kloosterboer, PMV
Jeffrey Pelton, Port Metro Vancouver (PMV)
Sunny Sandher, PMV

Aboriginal Groups

Candace Charlie, Cowichan Tribes (CT)
Eamon Gaunt, CT
Ashley Doyle, Kwantlen First Nation (Kwantlen)
Kathleen Johnnie, Lyackson First Nation (Lyackson)
Jaime Sanchez, Musqueam Indian Band (MIB)

Clarke Sparrow, MIB
Trefor Smith, MIB
Andrew Bak, Tsawwassen First Nation (TFN)
Brittany John, Tsleil-Waututh Nation (TWN) (dial-in)
Tanya Smith, TWN

Local Government

Carli Edwards, City of Richmond (COR)
Kimberley Armour, COR
Lesley Douglas, COR
Derek Jennejohn, Metro Vancouver (MV) (dial-in)
Laurie Bates-Frymel, MV (dial-in)
Mike Brotherston, Corporation of Delta (COD)

Proponent and Consulting Team

Allan Calder, Golder Associates Ltd. (Golder) (Victoria)
David Carter, Golder
Elaine Irving, Golder
Mark Dawson, Golder
Rachel Wyles, Golder
Sandra Witt, Golder
Art Diefenbach, WesPac Midstream—Vancouver LLC (Proponent)

Regrets:

Ministry of Community, Sport and Cultural Development
Ministry of Natural Gas Development
Penelakut Tribe

Meeting Notes

Welcome and Introductions

- MIB stated it is attending for information purposes; is seeking “large C” consultation in a government-to-government forum with the Province.

Scope of marine shipping (Environmental Assessment Office)

As a follow-up action from the last Working Group meeting, EAO provided its rationale on the scope of the EA in regard to marine shipping activities. This rationale was discussed at the July Working Group meeting and has been relayed in correspondence from EAO to a number of Aboriginal Groups.

- In consideration of geographic extent of potential shipping effects, EAO considered the following:
 - Care and control of LNG carriers and barges;

- Current regulatory environment for marine transportation (e.g. legislation governing marine operators, requirement for BC Coast Pilots, special operating procedures (e.g. presence of pilots, tethered tugs, maximum speed restrictions); established shipping routes including marine shipping routes and the Fraser River);
- Anticipated volume of ship traffic along shipping routes and current ship traffic of a similar size along those routes;
- Potential for accidents and malfunctions;
- Size of LNG Carriers; and,
- Scoping of marine transportation for other EAs of similar size/effect including other LNG related projects.
- In doing this analysis, EAO concluded that marine shipping is well regulated, with established shipping routes for both the marine and Fraser River transit. LNG carriers would be piloted from both Brotchie Ledge and at Sand Heads, possibly with two pilots being present at a time. EAO understands tethered tugs are also required for liquid bulk carriers of a certain size in special operating areas of Haro Strait and Boundary Pass. EAO concluded the proposed maximum ship traffic volumes from the Tilbury Marine Jetty contributed a small percentage to overall marine traffic. While LNG carrier traffic is likely to take the marine route through Juan de Fuca Strait, LNG barge traffic could serve a local market within BC and may therefore take a different marine route. Both LNG carriers and barges will enter and exit the Fraser River. EAO also determined that the LNG carriers and barges would not be owned or under the care and control of the Proponent.
- EAO recognized some important factors with respect to shipping traffic on the South Arm of the Fraser River that suggested the effects of shipping may differ on the river than in the marine environment:
 - Maximum size of the LNG carriers calling at the WesPac Tilbury Marine Jetty will exceed PMV's current allowable beam width dimension limits for vessels on the Fraser River and would likely take place under special operating procedures developed by PMV;
 - Shipping LNG is a new activity on the Fraser River where shipping of fuels/liquids has been raised by the public and Aboriginal Groups as a concern;
 - LNG carriers represent a greater proportion of overall deep sea vessel activity on the Fraser River than the marine environment. This is partially due to declining shipping volumes on the Fraser River;
 - Past LNG projects have identified concerns from fishers including Aboriginal fishers and recreationists with respect to safety exclusion zones considered for LNG carriers (including Woodfibre LNG); these zones, if used, may have a greater potential effect on the Fraser River given the width of the river than the marine route for carriers. Even without safety

- exclusion zones, potential effects from shipping on fishing activities are more likely in a narrower body of water (Fraser River) where there is less room to navigate around fishing nets resulting in the need for nets to be pulled up or fishing to occur at the sides of the river outside the shipping lane;
- Potential for accidents and malfunctions may be greater in a more confined area such as the Fraser River than in the marine environment; and,
 - Consistent scoping approach to Woodfibre LNG (to the mouth of Howe Sound) and Vancouver Airport Fuel Delivery Project (to the mouth of the Fraser River). EAO understands these past projects also included more care and control over marine shipping.
- CEAA, in its substitution decision letter to EAO, noted that:
 - “I also considered comments received from both Aboriginal Groups and the public in respect of the [substitution] request during a recent comment period, including the numerous comments relating to the environmental effects of marine shipping associated with the Project in areas of federal jurisdiction. In response to this concern, in my approval of your request for substitution, consistent with paragraph 34(1)(f) of the CEAA 2012, I have included an additional condition for the substituted assessment: the consideration of the environmental effects of marine shipping activities associated with the Project, and beyond the care and control of the proponent, along the designated shipping route within the South Arm of the Fraser River, from the Project’s marine terminal to the pilot station at Sand Heads.”
 - Since EAO established the scope of effects for shipping, the Proponent has revised their project, reducing the number of LNG Carriers through Juan de Fuca Strait from 122 (up to 90,000m³) to 90 (48 carriers up to 90,000m³, and 42 carriers up to 65,000m³). Similarly, the number of Barges has been reduced from 90 (up to 4,000m³) to 34 (up to 7,500m³). Therefore, the volume of project-related ship traffic in the context of overall ship traffic is a lower percentage than when the decision on scoping was made.
 - As demonstrated with the navigation VC, because marine shipping effects are scoped to the mouth of the Fraser River, this does not imply that all VC boundaries are confined to Sandheads. In the case of Navigation VC (both local and regional study boundaries), the boundary is larger than the mouth of Fraser river to account for the area where a ships master makes a navigational decision regarding LNG carrier traffic that may be entering/exiting the river.
 - EAO is aware that in other EAs for LNG projects (not Woodfibre), scope was considered to marine pilot stations. In these circumstances, there was a single pilot station and no river pilot station. The only river

pilot station in BC is Sandheads. For the Northwest projects, there was also no designated shipping route from the marine pilot station to the proposed LNG facilities.

- EAO is confident regarding its decision about scoping, which the federal government came to a similar conclusion in regard to, on this proposed Project. EAO asks the working group to turn its mind to the study area boundaries, which could exceed Sandheads (e.g. navigation).

Working Group Discussion

- MIB asked percentage threshold of increase to shipping used by provincial and federal governments as rationale for scope of marine shipping. EAO reiterated that numerous factors led to the marine shipping/scoping decision and that the overall percentage volume of shipping from the Project is greater on the Fraser River than in the marine environment; partially because ship volumes on the Fraser River have decreased over time and that marine shipping percentage volumes for WesPac are within a range similar to Woodfibre; although the WesPac carriers are smaller in size.
- EAO reiterated that unlike northwest BC, a shipping lane is designated in Juan de Fuca to the marine jetty; this is not the case in NW BC from pilot stations to marine jetties. EAO is aware that of at least one NW LNG project including as a condition a designated area for ships to transit. Such a condition would be unnecessary for this Project as regulation already determines where ships may transit.
- MIB stated that projects up north had speed limits provided, and MIB does not deem the presence of a river pilot station as being relevant to a marine shipping/scoping decision, noting MIB and other Aboriginal Groups being potentially adversely affected by large vessels outside the Fraser River from the Tilbury Marine Jetty. EAO clarified its comments about a river pilot station vs a coastal pilot station was in response to a written MIB comment that EAs have historically scoped shipping effects to a coastal pilot stations, not a river pilot station. EAO clarified there is only one river pilot station in BC (Sandheads for the Fraser River); the only other EA that could potentially consider a river/coastal pilot station was VAFD which also scoped shipping effects to Sandheads.
- COR asked if information could be shared between other EAs (including GMTR). Proponent responded information needs to be accessible (public or in finished state) in order to be used at time of Application.
- TFN raised concerns related to polluter pay response and spills – will need to know what that chain of care and control is, and whether companies shipping through Canadian waters have the funds to cover any costs of cleanup from potential spills.

- FRP noted Pilotage Authority Regulations require all ships over 350 gross tonnes to have a pilot on board. If a ship comes to the south coast from Prince Rupert, a pilot would stay with the ship all the way to the Fraser River. If a ship is within ~3 miles of land between Alaska and Washington, there will be a marine pilot on board. MIB noted Prince Rupert coastal pilot station is Triple Island, and the equivalent for this project would be Victoria. EAO noted it considered what factors that went into scoping on the north coast, Woodfibre, VAFD.
- COR noted Fraser Surrey Docks had not been considered for cumulative effects – The Proponent noted that the effects assessment had been expanded to include Fraser Surrey Docks for navigation. COR noted concerns about cumulative effects of existing and proposed projects for the South Arm of the Fraser River.
- MIB asked if Sandheads intersected with designated shipping lane. TC explained from Sandheads lighthouse to inside edge of the northbound traffic lane is about a mile and a half (approx. 2km).

“Journey of the tanker” (Transport Canada/Fraser River Pilots /Port Metro Vancouver/Pacific Pilotage Authority /Canadian Coast Guard)

Presenters included: Bob Gowe, TERMPOL Secretariat for TC; Lindsay Funk, Canadian Coast Guard; Brian Young, Fraser River Pilots; Mike Armstrong, Fraser River Pilots; Chris Wellstood, PMV.

Working Group Discussion

Marine Safety Regime including Spill Response/Protection

- Lyackson noted Hul’qumi’num Treaty Group (HTG) elders are interested in accountability for ballast water changes. TC noted water salinity content can be assessed to ensure ballast exchanged beyond the 200 mile limit. TC noted vessels must report this exchange and some are inspected. PMV noted ballast exchange is not an onerous undertaking; the risk of getting caught exceeds difficulty of changing the ballast water.
- Lyackson noted elders have seen brown sludge around ships in Ladysmith Harbor/Cowichan Bay. TC speculated it could be rusty ballast or bilge water. FRP noted locals can inform TC when they see a discharge from a ship for TC consideration of conducting an inspection.
- In response to MIB/COR question, FRP confirmed ships may diverted to English Bay due to bad river conditions depending on specific conditions including vessel type/size.
- TFN noted an interest in inspections and enforcement and whether BC has any experience with regard to LNG vessels.

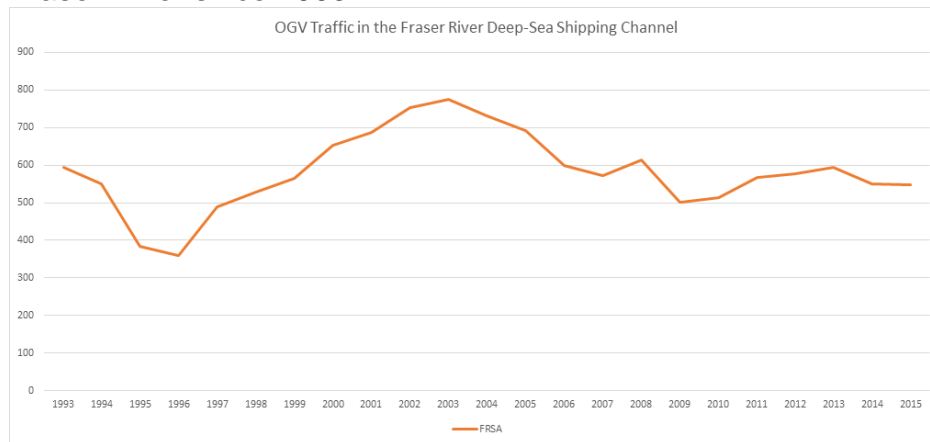
- FRP noted pilots report what they see on the water to TC. TC noted it is looking at its regulations to ensure everything is in place for when/if LNG carriers begin shipping on Canada's west coast of Canada and a gap analysis is being undertaken.
- MIB asked about marine security zone for LNG carriers and who would be responsible for enforcing. TC indicated PMV would likely have jurisdiction. The proponent indicated it is currently discussing security zone/enforcement with PMV. PMV clarified this project is not within lands administered by PMV but is within its navigational jurisdiction. TC would have some role approving a terminal security plan for any operating port within Canada.
- PMV clarified the difference between a terminal security plan (perimeter around terminal), vs. a moving exclusion zone around a vessel, which in PMV's jurisdiction has not typically been supported as a number of other factors effectively operate as a moving bubble around such a vessel. For example, FRP indicated there will be specific regulations regarding the LNG Carriers (i.e. in PMV Information Guide), such as the requirement for tethered tugs, setting of maximum speed limits, designated meeting areas and prohibiting certain maneuvers (e.g. no overtaking of an LNG ship) to ensure safety. PMV has authority to make a safety zone in/around the berth or ship while it is moving. Prince Rupert port authority has a safety zone off each facility of 50m. In response to Lyackson question, PMV clarified the no overtaking of an LNG ship would only apply to foreign-operated deep-sea ships as a small ship overtaking a deep-sea LNG vessel does not carry the same level of risk as if one deep-sea vessel overtaking another.
- TWN, MIB, CT and Lyackson requested a copy of the proposed security plan from the Proponent. Action: Proponent to provide copy of proposed security plan.
- OGC noted security management falls under regulations as well, which PMV oversees. TC noted final marine security plan is not done until after facility is built. Such plans do not apply to exclusion zones on the water.
- TC clarified spill statistics from presentation: 1.8 spills globally/year.
- COD asked about how spill statistics relate to a larger LNG carrier and volumes, if fueled by bunker fuel and not natural gas. TC confirmed spills over 700 tonnes were considered in the presentation; LNG carriers would have considerably less. Proponent noted most of the ships would run on LNG; will have some marine gas oil and potentially bunker as backup, but very unlikely to be over 700 tons. Action: Proponent to provide approximate maximum amount of bunker fuel that LNG carriers would contain.
- EAO asked about the requirement for tethered tugs from Juan de Fuca to East Point and for clarification whether barges coming through Juan de Fuca would require marine pilots. PPA responded if a vessel or

- combination (e.g. barge and tug combined) is over 350 gross tonnes and is not a local vessel, it will need a pilot. Even local operators must have a certain level of experience in the river before not requiring a FRP pilot. All tankers with a dead weight tonnage of 40,000 will have a tethered tug between 3 miles north of east point (into Boundary Pass), to Race Rocks just past Victoria. Proponent confirmed proposed barges would not require tethered tugs. TC clarified tugs may qualify for a waiver if the master meets the requirements.
- Re: security plan: OGC noted security management falls under regulations as well, which PMV oversees. TC noted final marine security plan not done until after facility is built. Such plans do not apply to exclusion zones on the water. TFN noted Aboriginal fisheries can only be limited by health or public safety matters, and this may well be a public safety concern. Interest in whether this could impact their constitutionally protected Aboriginal right to fish. PMV noted TFN's concerns.
 - WG expressed an interest in receiving information on 2 additional components of Canada's marine safety system: preparedness and response; and liability and compensation. Action: EAO to include 2 additional components of Canada's marine safety system: preparedness and response; and liability and compensation in future WG discussion.

Fraser River Traffic

- FRP confirmed that for 2015, 1088 foreign-going ships were on the Fraser River (3 ships/day). This number accounts for voyage up/down the river so actual ship numbers is half (544). Peak volume for shipping was 2004 with approximately 1700 or 4.5 ships/ day. FRP noted the 2004 volumes did not pose any problems. Lyackson questioned foreign-vessel traffic volumes to domestic traffic and total traffic on the Fraser. FRP confirmed domestic traffic is greater (e.g. fishing boats, scows, ferries, tugs and recreational boaters) than deep-sea ship traffic of approximately 35-40 million tonnes. FRP clarified to COR that ships above 350 gross tonnes have to comply by the rules, and that foreign-vessel traffic must have Fraser River Pilot on board vessel. COR/Lyackson expressed interest in understanding the numbers for all vessels above a certain size on the Fraser River. Action: EAO to include as future WG discussion information on total Fraser River marine traffic use, including existing and projected, foreign and domestic shipping traffic in the South Arm of the Fraser River. Proponent noted existing shipping/use of the Fraser River this will be discussed in greater detail in the Application.
- Lyackson noted increase in traffic has led some Lyackson fishers to cease/reduce fishing on the Fraser. FRP noted that LNG ships, tethered with tugs, would be amongst the safest vessels on the Fraser River, as it is easier to avoid fishers/fishing vessels.

- FRP noted bathymetric surveys (accurate within 1 cm) survey both deep-sea channel and entire website. Coastguard Avadept surveys available online. FRP noted 1080 ship *movements*, but there are less than 550 ships actually on the river each year.
- PMV has noted that there has been a decrease in traffic in the last decade, which was highlighted by FRP during the presentation, and at that time, the river was not busy from a deep sea vessel navigation perspective. Lyackson raised the issue of barges on the river also. PMV also provided the following to indicate levels of traffic in the Fraser River since 1993:



Fishing

- TFN asked how information about LNG vessels is communicated to fishers on the water and MIB asked about coordination of First Nations on the river (fishing) and to what extent has *Haida Taku* decision regarding the duty to consult had been incorporated? FRP explained re: First Nations-only fisheries, typically sees ~5 boats between Fraser Surrey Docks (FSD) to Sandheads during Aboriginal fisheries-only windows. Larger precautions needed during commercial/recreational windows which FRP tries to accommodate when they can. MIB clarified FRP notifies fishers. FRP explained broadcasts & patrol boats ahead of large vessels that warn fishers.
- FRP noted it has a 12 hour notice of a ship that plans to enter the river. Escorts on the river (patrol boats) go ahead of ships to advise fishers of approaching large ships. Fish Safe BC is an information source on commercial fishing on the river. While CCG documents commercial traffic numbers; fishery information is available to CCG from DFO or Aboriginal Groups.
- TFN noted Aboriginal fisheries can only be limited by health or public safety matters, and this may well be a public safety concern. Interest in whether this could impact their constitutionally protected Aboriginal right to fish. PMV noted TFN's concerns.

River Processes

- TFN asked if there is a repository of information regarding hydrology to model changes to the river over time. The proponent explained hydrological modelling has been done at the site and the river process PC considers this information. TFN asked if this would relate to accidents/malfunctions. PMV noted this would only be needed if the riverbed was being changed (e.g. where the berth pocket is proposed to be dredged).
- FRP noted bathymetric surveys (accurate within 1 cm) survey both deep-sea channel and the entire river. Coastguard Avadept surveys available online.

Cumulative Effects

- Lyackson noted cumulative effects of all shipping affected Lyackson fish preferences.
- MIB expressed cumulative effects concerns, including potential removal of the George Massey Tunnel could (GMT) substantively changing the Fraser River, MIB stated these cumulative effects need to be scoped into the EA, MIB reiterated their opposition to substitution.
- PMV clarified that this project does not require removal of GMT, understands MIB cumulative effects concerns. The proponent noted it has included reasonably foreseeable projects in its preliminary list of projects for a cumulative effects assessment.

SIGTTO LNG site selection summary

- Proponent noted presentation on Sandia reports would be undertaken after the risk assessment had been completed.

Working Group Discussion

SIGTO and WesPac/Fortis LNG Facility

- COR asked whether OGC has a role in SIGTTO standards. OGC noted it considers them in its analysis. Hazard identification study, process hazard analysis, safety integrity level studies, design and safety studies, must be constructed to CSA standards (276 and others for marine jetties).
- Note provided by OGC: it should be clear that OGC does not have any role in creating SIGTTO standards since it is an industry association. SIGTTO largely addresses shipping issues and those issues are addressed by other regulators since shipping is outside of the mandate of the Commission. OGC does not directly consider SIGTTO standards in permit reviews but many of the same issues are addressed in the

- various studies that are required under the *LNG Facility Regulation* (LNGFR). SIGTTO standards are not enforceable, while the *LNG Facility Regulation* is through legislation. Within that regulation additional requirements for safety are addressed under CSA Z276. While OGC will not be permitting Tilbury Marine Jetty under the LNGFR, it has directed WesPac to follow several sections of that regulation and have them submit information to the OGC to satisfy those requirements.
- COR asked about the property line between FortisBC's LNG facility and WesPac shipping facility and OGC role in transfer/movement of product. OGC explained WesPac's control room will be linked to FortisBC's with constant communication between the two while tankers are loaded. The Proponent noted control of the loading operation onto LNG ships will largely be the responsibility of FortisBC (responsible for ensuring fill rate is comparable to the returning gas coming back). FortisBC will start/stop pumping; both Fortis and WesPac will have emergency shutdown ability.
 - MIB asked whether liability requirements are provincial or federal jurisdiction. TC noted if the spill occurred on the ship, pollution prevention fund would provide funds to responsible port authority/on-scene commander, who can immediately make orders. EAO noted presentation would be provided to the SharePoint site from this morning's presenters on liability and compensation, environmental protection regulations, compliance and enforcement, and AIS comparison. Action: Proponent to provide clarification on how the responsible polluter is defined in the case of an accident, and further detail on liability and compensation.

Permitting

- OGC explained its permit review will be synchronous with the EA process. It is up to the Proponent to determine if it will make an application for concurrent permitting. MIB expressed concern about synchronous permitting.
- TC asked OGC whether current tank construction is being permitted by OGC, and whether the exclusion zone of the tanker will be larger than for the pipeline back to the terminal. OGC explained its engineers will be looking at this during the Application phase.
- TWN received confirmation from OGC/EAO that permits are invalid without an EA Certificate. TWN suggested combining conversations from the EA (whether a project should proceed) and permitting from OGC (how a project should proceed) during the synchronous permitting process.
- TFN asked whether consultation was provided on the National Energy Board's export license. EAO confirmed this was a completed July WG meeting action item; and consultation was not a requirement.

- TC noted if an EA Certificate is issued, it will move ahead with consultation for its permit under the *Navigation Protection Act*.

Overview of key changes to draft VC document

General

- Proponent noted receipt of about ~600 WG comments on the draft VC document. COR and MIB noted difficulty in providing meaningful feedback on the tracking table when received just before the meeting.
- EAO noted WG members will have two weeks (February 18) to provide final comments on Proponent responses. EAO noted further changes to the VC document may result after EAO review of all WG/public comments. Action: EAO to confirm in email deadline for WG comments on tracking table of proponent responses.
- EAO asked what public comments led to changes in the VC document; Proponent noted no major additional changes from changes made as a result of Working Group review. EAO noted it may request WG assistance to review some Proponent responses to public comments (e.g. may request TC assistance on marine shipping comments).

Cumulative Effects

- Past activities currently affecting a VC will be considered in the cumulative effects assessment.
- TFN provided update on Tsawwassen LNG proposal, which membership voted down in December 2015.
- EAO confirmed from previous meeting discussion that the proposed expansion of Seaspan's dock facility must be included in the VC document.
- TFN asked if PMV could provide information on other nearby projects. Action: Proponent to compare past, present and reasonably foreseeable project lists with PMV to ensure no gaps in cumulative effects assessment for the EA.
- MIB noted concern around cumulative effects in South Arm of the Fraser River and need for a broader a regional effects assessment. COR reiterated this concern.

Navigation VC

- TC could order changes to lighting for projects to address adverse effects to navigation. Proponent confirmed to Lyackson lighting will be in line with maritime law and all other requirements.
- TC comfortable with pilots' conclusions on piloted vessels but some remaining concerns re: unpiloted vessels. TC maintains the LAA/RAA boundary should be 10km out from Sandheads as articulated in their

comments. Action: Proponent indicated it will adjust study area boundary as recommended by TC.

Air Quality

- Proponent confirmed to MOE-CAS that Air Quality VC captures greenhouse gases (GHGs), to be further discussed in dAIR presentation.

Baseline Studies

- In response to Lyackson question, the Proponent confirmed core sampling in river and surface sampling had been done. Lyackson asked for an archaeological review of core samples and noted after 17 years of working with archaeologists and looking at archaeological sites, one days' training is not sufficient for Proponent's archaeologists. Lyackson noted it is invested in protecting that archaeological record, including at Cowichan village site. Action: Proponent to confirm with Lyackson whether core samples undertaken last year are still accessible.

Key components of dAIR and timing of working group review of dAIR

- Proponent noted dAIR was almost complete and would be ready to send to the WG soon. EAO confirmed WG will have 3 weeks to review.

Proponent overview of assessment approach for water quality:

- Proponent's question to WG on whether to have a qualitative or quantitative approach.
- ECCC asked about effects to biofilm of dredging. Proponent noted no expectation of any dredging in the area that the mudflat occurs
- COR asked about acceptable TSS/turbidity levels from dredging and whether they can be exceeded during construction; Proponent noted provincial and federal guidelines and intention to stay within guidelines during construction.
- Proponent confirmed they would have commitments to manage and mitigate any impacts related to TSS/turbidity; they are proposing to not undertake predictive modeling based on current/baseline findings. Confirmed this approach would not preclude studies to impacts downstream on fish and fish habitat.

Proponent overview on Air Quality:

- MV asked Proponent about Annacis Island site data. Proponent submitted a conceptual model in October 2015 and a detailed proposal on how they proposed to use modelling, data Proponent recently heard back from MV and will use data from Annacis Island as primary source for wind data in the dispersion modelling and will consider Vancouver Airport station as well, and data from Burns Bog. Proponent is using 2013 as the model year as this is the year where the most data is available. MV noted concern that Annacis is not a public site and may not have all of the required meteorology/parameters.
- Proponent explained “bounding” phase, looking at each project phase with a potential effect (i.e. construction, operation and decommissioning). Highest project emissions phase will be used in the effects assessment.
- FH asked if a list of criteria air pollutants that would go into dispersion analysis and human health impact assessment will be in the dAIR. Proponent confirmed the dAIR will have this information and, noted such conversations with MV have occurred already.
- TWN asked whether recent federal government announcements on GHGs and upstream emissions would apply to this project. Proponent responded conversations are ongoing. EAO noted whatever requirements the federal government may implement, will be met in this substituted EA. TWN noted they would like to see Proponent taking initiative and looking at upstream emissions. TWN noted interest in how this project situates itself within provincial/Canadian climate change emissions targets.
- MIB asked whether legislated emissions targets would be considered in the thresholds for significance. Proponent noted they would be considered for comparison only. MIB asked EAO about application of methodology on EAs and whether GHGs were considered in some northern LNG projects. EAO explained in some cases a Proponent considered the percentage of the national or provincial emissions attributed to a project EAO/Proponent noted this project is anticipated to be orders of magnitude smaller than a pipeline/LNG facility in terms of GHG contributions. MV noted its regional GHG reduction target could be considered in the assessment.
- FH summarized comments from a health perspective. Air quality and noise both included. Other elements that may need to be considered, from a health perspective, include: soil and sediment; surface and ground water; drinking water; agricultural impacts; fish and fish habitat; socioeconomic impacts (including potential benefits) for both construction and operational phases. FH noted it would be helpful to have reasonably foreseeable human exposure pathways discussed. Accidents and malfunctions are important to consider for human health in the dAIR and emphasis should be on prevention.

- TFN commented that their technical consultants would provide further comment on air quality and water quality VCs.

Review of previous action items

- EAO reviewed status of action items from December 1, 2015 WG meeting (attached).

Next Steps in the EA and closing

- Next WG meeting agenda will focus on comments received from WG on dAIR, how Proponent proposes to address them as demonstrated in a revised dAIR. Also, agenda topics will include additional discussion on marine safety/systems; Sandia, and OGC's role and regulatory regime/safety measures in place once vessels dock. Likely such a meeting will not occur until late March.
- TFN thanked Proponent for boat tour on February 3. Noted considerations for TFN of potential changes in viewsapes on cultural transmission/cultural practices.

Action Items

	Action	Status
1	EAO to include 2 additional components of Canada's Marine Safety System: preparedness and response; and liability and compensation, in future WG discussion. Also to include: <ul style="list-style-type: none"> • larger picture of vessel traffic on the Fraser River, <u>including</u> existing and projected, foreign and domestic shipping traffic in the South Arm of the Fraser River; • inspections and enforcement; • foreign vessel traffic comparatively to domestic traffic to be added to action items; • current and projected shipping numbers. 	Ongoing
2	Proponent to share proposed draft security plan to MIB, Lyackson, Cowichan Tribes & TFN	Ongoing
3	Proponent to provide approximate maximum amount of bunker fuel that LNG carriers would contain	Ongoing
4	Proponent to provide clarification on how the responsible polluter is defined in the case of an accident, and further detail on liability and compensation	Ongoing
5	Proponent to compare past, present and reasonably foreseeable project lists with PMV to ensure no gaps in cumulative effects assessment for the EA	Ongoing

6	Proponent to adjust study area boundary necessary for navigation component as recommended by TC.	Ongoing
7	EAO to confirm in email WG deadline for comments on the VC document tracking table. Comments requested by Thursday, February 18, 2016	Email sent to WG February 10, 2016
8	Proponent to ensure proposed Seaspans expansion included in cumulative effects list as discussed in the December 2015 WG action item list.	Ongoing
9	Proponent to confirm with Lyackson whether core samples undertaken last year are still accessible.	Ongoing