

ROBERTS BANK TERMINAL 2 (RBT2) PROJECT WORKING GROUP (WG)

**Workshop 2
April 15, 2014**

Summary of the Roberts Bank Terminal 2 Project, Working Group (WG) Workshop #2 held Tuesday, April 15, 2014 at the SFU Harbour Centre, 515 West Hastings Street, Vancouver, British Columbia.

ATTENDEES

- David Grace, B.C. Environmental Assessment Office (Project Assessment Manager)
- Robyn McLean, Canadian Environmental Assessment Agency (Project Manager)
- Debra Myles, Canadian Environmental Assessment Agency (Panel Manager)
- Analise Saely, Canadian Environmental Assessment Agency (Senior Policy Advisor)
- Donna Chan, City of Richmond
- Lesley Douglas, City of Richmond (Manager, Environmental Sustainability)
- Paul Lee, City of Surrey
- Polly Ng, City of Surrey
- Mike Brotherston, Corporation of Delta
- Bernita Iversen, Corporation of Delta
- Doreann Mayhew, Corporation of Delta
- Larry George, Cowichan Tribes
- June Yoo Rifkin, Environment Canada (A/Head, EA Unit)
- Yota Hatziantoniou, Health Canada (Regional EA Coordinator)
- Erin Bishop, Hemmera* (arrived 1:00 p.m.) (Project Manager – SocioEconomic)
- Tanya Hebron, Hemmera* (Project Coordinator)
- Pamela O'Hara, Hemmera* (Project Manager / Regulatory Manager)
- Alan Grove, Hwlitsum First Nation
- Zoe Mullard, Kirk & Co*. (Senior Communications Advisor)
- Kathleen Johnnie, Lyackson First Nation
- Eric Aderneck, Metro Vancouver
- Kathy Preston, Metro Vancouver (arrived 1:00 p.m.)
- Shelina Sidi, Metro Vancouver
- Helen Berthin, Ministry of Transportation and Infrastructure

- David Crozier, Ministry of Transportation and Infrastructure
- Earl Strueby, Ministry of Transportation and Infrastructure
- Leona Sparrow, Musqueam Nation
- Jody Addah, Port Metro Vancouver (Sustainable Development Specialist Infrastructure Development)
- Dennis Bickel, Port Metro Vancouver (arrived 11:30 a.m.) (Manager, Transportation Planning)
- Sharleen Dumont, Port Metro Vancouver (Senior Legal Counsel)
- Rhona Hunter, Port Metro Vancouver (Acting Director, Infrastructure Development)
- Natalie Jackson, Port Metro Vancouver (Project Administration)
- Michelle Lachmann, Port Metro Vancouver (Regulatory Engagement)
- Cindy McCarthy, Port Metro Vancouver (Manager, Project Communications Community & Aboriginal Affairs)
- Sean McNulty, Port Metro Vancouver (Env. Project Management Specialist)
- Emir Mehinagic, Port Metro Vancouver (Communications Advisor, Public Affairs Project Development)
- Kyle Robertson, Port Metro Vancouver (Manager, Environmental Assessment and Permitting, Infrastructure Development)
- Jemma Scoble, Port Metro Vancouver (Aboriginal Consultation)
- Cliff Stewart, Port Metro Vancouver (Acting VP, Infrastructure Delivery)
- Steve Hayto, S5 Services
- Dan Hrebnyk, SENES Consultants Ltd.* ((Air Quality Consultant) Manager, B.C. Office)
- Paul Cordeiro, Township of Langley
- Gina Aitchison, Transport Canada (Senior Environmental Officer) Catherine Galbrand, Transport Canada
- Lynne Tolland, Transport Canada
- Colin Ward, Tsawwassen First Nation
- Celesa Horvath, Ventus* (senior EA Advisor)
- Clair Wakefield, Wakefield Acoustics* (Item 10, via teleconference) (President)
- Andrew Williamson, Wakefield Acoustics* (arrived 1:00 p.m.) (Project Engineer)
- Peter Geldreich, WorleyParsons* (Engineering Manager)
- Wade Major, WorleyParsons* (Project Controls Manager)

(* Appearing on behalf of Port Metro Vancouver)

FACILITATION / MEETING SUMMARY

- Garry Alexander, Facilitator, Garry Alexander Consulting Ltd.
- Carrie Peacock, Recording Secretary, Raincoast Ventures Ltd.

CALL TO ORDER

The meeting was called to order at 9:05 a.m.

1. WELCOME AND INTRODUCTIONS

Garry Alexander, Facilitator, welcomed participants to the second Working Group Workshop (WG#2), and acknowledged that the workshop was being held on the traditional land of the Coast Salish peoples. He introduced himself and led the meeting in a round of self-introductions.

Mr. Alexander reviewed the agenda, and some logistical and housekeeping issues related to the meeting. Participants were encouraged to ask questions, following each of the presentations provided. Additionally, participants were invited to complete and submit the "Roberts Bank Terminal 2 WG #2 Question Form" provided with the handout packages. Mr. Alexander stated that any written questions would be answered at the end of the meeting, if time permitted, or sent out with the meeting summary.

2. WORKING GROUP PROCESS AND WG#1 RECAP

Objectives of WG#2 were discussed, and notes of the February 25, 2014 Workshop (WG#1), the presentation slides, and the Terms of Reference for the WG process were noted as being available.

Working Group #1 presentation topics were recalled: Port Metro Vancouver Overview; Roberts Bank Terminal 2 Project Description; Environmental Assessment (EA) Process Overview; Public Consultation to Date; Technical Advisory Group Process; and Site Tour.

Based on the comments received at WG#1, it was determined that WG#2 would focus on key transportation issues set out in the agenda.

Port Metro Vancouver (PMV) responded to a question at this stage that reports referred to in the presentations today have not yet been finalised. Ultimately, they will be available through the EIS review process.

3. INTRODUCTION TO CONTAINER MOVEMENT IN THE PACIFIC GATEWAY

Cliff Stewart, (Acting VP, Infrastructure Delivery, Port Metro Vancouver (PMV)), led the meeting in a review of an overhead presentation, and offered comments regarding: types of container terminals and their uniqueness based on the trade(s) supported; port-related infrastructure clustered along the South Fraser Perimeter Road (SFPR) and at facilities across the Lower Mainland; and, container flows (imports, exports and empties) to other facilities or destinations.

Comments were also offered on Port Metro Vancouver's navigational jurisdiction area; lands managed by PMV (which are federally owned); and PMV's contractual and operational relationships with terminals, off-dock facilities, shipping lines, railways, cargo owners and trucking companies.

Discussion Session

Questions and comments from WG members are summarised below, with responses from PMV representatives (or those attending on PMV's behalf) in *italics*.

- 1) How long does a container last and what are the options for extending their use?

The lifespan of an average container can vary between 10 and 20 years. The bottom of containers can be repaired; there is an active container repair market.

- 2) Can you explain where PMV has jurisdiction and whether the jurisdiction varies in the areas delineated in the slide (slide # 28)? What control does PMV have for movements over land?

Port Metro Vancouver has a responsibility to ensure the unimpeded access of vessels up and down the Fraser River, and in and out of PMV terminals at Roberts Bank and Burrard Inlet. PMV has responsibilities for navigational hardware and anchorages, and ensures the vessels flow freely and follow regulations. Further, both the lands and waters encompassed by the solid red lines in the slide presentation, belong to the federal crown. PMV exists as a port authority under the Canada Marine Act with intent to further Canada's trade objectives. PMV is the interface between water and land transportation networks. Port regulations cover a narrow range of issues.

For a truck to handle containers within port jurisdiction, they need a license from the port (PMV's Truck Licensing System).

- 3) Does the truck licensing system apply to any truck entering the marine terminal? Does the licensing piece extend to TransLink facilities?

The licenses are truck specific. If a truck was going from a marine terminal to an off-dock facility, the licensing requirement for payment applied. If however the

truck was going between two off-dock locations, it did not apply.

- 4) Can you explain changes to the "Headlease" tenure held by PMV?

The lower reaches of the main arm of the Fraser River and the north arm are provincial Crown lands. These areas have been managed by PMV and its predecessors under long term leases, referred to as "headleases". The decision was made last year not to enter into a new headlease, and the existing headleases will conclude at the end of this year (2014). PMV will retain navigational jurisdiction, pursuant to its authority under the Canada Marine Act, but the province will be responsible for managing those lands.

- 5) It was mentioned that PMV has navigational jurisdiction to ensure unimpeded movement of vessel traffic. How will PMV ensure that constitutionally protected rights of Aboriginal groups, such as the right to harvest fish, are addressed with increasing vessel traffic?

The approach to Terminal 2 is a relatively small footprint. The frequency of vessel arrivals and departures is relatively low (relative to B.C. Ferries). PMV is undergoing consultation with Aboriginal Groups to hear directly from potentially affected groups regarding their interests and issues on this subject. This Working Group process is not meant to replace, but rather complement, a separate Aboriginal consultation process.

- 6) How many more trucks will need to be licensed for the Project?

There are about 24,000 articulated transport vehicles licensed in B.C. The Port licenses less than 10% of these to access Port terminals.

An approved Truck Licensing System (TLS) license is required by any party wishing to access Port Metro Vancouver's property for the purposes of draying marine containers to or from any of the terminals under the jurisdiction of Port Metro Vancouver.

The Truck Licensing System focuses on ensuring that container trucks entering Port Terminals comply with PMV's stringent safety and environmental requirements. To meet these goals, the Truck Licensing System optimises the number of trucks to meet container demand. For example, in 1999, there were approximately 4,000 trucks working in the local container sector at a time when the capacity at Port terminals was roughly 1 Million TEUs of containers. Since this time, and the establishment of the truck licensing system, Port Metro Vancouver licensed roughly half the number of trucks (approximately 1,900 in 2013) when terminal capacity increased to 2.8 million TEUs.

The number of new truck licenses required to move the additional container volume from RBT2 would be dependent on trucking efficiencies at the time of operation (anticipated early 2020s).

- 7) The slide on the supply chain was informative (slide# 30), as it showed contractual relationships. Can you explain the operational relationships with service level agreements (SLAs) and without SLAs? Is there an impediment to

getting a SLA?

The SLAs are a new phenomenon in the marketplace. They developed over time with recognition there are people doing business together every day. Rail cars are being loaded and unloaded on the marine terminal. The terminal controls the loading and unloading. Folks are doing business together with no contractual arrangements. SLAs create a written understanding of expectations and commitments on how to do business together. There is a requirement to pay for something (a tariff). Terminals, on behalf of PMV, collect a wharfage charge (a charge on cargo).

Break: The meeting recessed at 10:10 a.m. and reconvened at 10:25 a.m.

4. CONTAINER MOVEMENT AT ROBERTS BANK

Wade Major, Project Controls Manager, WorleyParsons, introduced his colleague Peter Geldreich (Engineering Manager, WorleyParsons), before leading the meeting in a review of an overhead presentation. During the presentation, comments were offered regarding: Roberts Bank traffic volume predictions (with and without the RBT2 Project); anticipated terminal capacity from the Deltaport Terminal, Road and Rail Improvement Project (DTRRIP); current and anticipated ship sizes; and, rail traffic assumptions.

Mr. Major further reviewed changes predicted for RBT2 traffic. He commented on: annual terminal capacity anticipated for 2012 and 2030 and anticipated annual ship movements for 2012 and 2030.

Discussion Session

Questions and comments from WG members are summarised below, with responses from PMV representatives (or those attending on PMV's behalf) in *italics*.

- 1) Have studies been done on the impacts of increased terminal capacity on bird habitat and migrating bird populations? This is relevant to Aboriginal group consultation.

Yes, many studies have been conducted over the years. A technical advisory group of various experts and agencies, met between November 2012 and May 2013 and considered how to best conduct these studies. Further information on the technical advisory group is available on PMV's website. PMV is also engaging with Aboriginal Groups to hear directly from potentially affected groups regarding their concerns / issues on this subject.

- 2) What are the effects from increasing shipments of coal?

The RBT2 Project is about container traffic only. However, PMV will be considering coal ships as part of existing conditions description and future conditions

assessment of the EIS. PMV is working with Westshore to get a sense of the number of ships going to Westshore Terminals in the future. We are illustrating some of the numbers we have received to date.

- 3) Can capacity at the current terminal (Deltaport) be expanded with equipment investment or upgrades?

That expansion has already started through the Deltaport Terminal, Road and Rail Improvement Project which will provide for an additional 600,000 TEUs throughput at Deltaport.

- 4) When do you expect this to be fully operational?

We anticipate RBT2 will be fully operational by 2025.

- 5) You have a different number of vessel calls for RBT2 and Deltaport in 2030. Is that based on storage capacity?

Container ship traffic at RBT2 was assumed to be the same as at Deltaport, except that the split service route for Deltaport (Asia to Deltaport to Seattle/Tacoma to Deltaport to Asia) that creates an additional 52 ship calls per year at Deltaport, was assumed not to occur at RBT2 (Asia to RBT2 to Asia).

- 6) Why are you including ferry traffic in your information?

Ferry traffic is included as it is within PMV's navigational jurisdiction. The numbers shown in the slides will be parsed further in the presentation. Information will be provided in which the inclusion and exclusion of ferries will be compared.

- 7) How many people currently work at the terminal?

On a typical day, approximately 1,100.

- 8) Have the impacts of longer trains been considered in PMV's analysis with respect to the impacts to the road network?

The scope of the study is limited to that within PMV's jurisdiction. It is acknowledged that the time it will take for a longer train to pass a road crossing will increase and conversely, longer trains would reduce the number of trains crossing the road network. This is something stakeholders can work together to address as discussed later. It is also important to note that through the RBRC Program, several road - rail separation overpasses will be completed and in operation this year (2014). RBRC was a cooperative effort launched about ten years ago, when the Deltaport Third Berth and the first iteration of RBT2 were presented, to deal with out-of-scope concerns that government and the public had (related to the Third Berth Project and original Terminal Two).

Agenda Varied: The Agenda was varied to consider a new item: "Scope of Transportation within RBT2 EIS".

5. SCOPE OF TRANSPORTATION WITHIN RBT2 EIS

Kyle Robertson, CCIP Manager, Environmental Assessment and Permitting, Port Metro Vancouver, explained that the scope of the Project was articulated in the final EIS guidelines (dated January 7, 2014). While reviewing a slide on the scope of the Project, he commented regarding:

- The scope of the Project, including marine, road and rail transportation within the areas for which the proponent (PMV) has jurisdiction;
- PMV's intent to work with local government and Gateway stakeholders to address shared concerns, trends and initiatives that may be required related to goods movement; and
- Efforts made to address transportation infrastructure needs.

6. PACIFIC GATEWAY TRANSPORTATION INFRASTRUCTURE AND INITIATIVES

Kyle Robertson, Port Metro Vancouver, led the meeting in a review of an overhead presentation, and offered comments regarding: PMV's involvement in infrastructure, transportation initiatives and partnerships; operational challenges (e.g. achieving consensus on operating hours) and addressing public concerns (congestion, air pollution emissions, safety concerns); PMV's various transportation-related initiatives, including: noise monitoring program, smart fleet trucking strategy, non-road diesel emission initiative, truck licensing system; regional transportation plans and strategies; completion of the Roberts Bank Rail Corridor Program; and, regional transportation infrastructure and initiatives.

Port Metro Vancouver recognised the need to continue working with Gateway Stakeholders to identify shared emerging and future transportation infrastructure needs in key goods movement corridors and proposed, with the support from the B.C. MOTI, the development of a framework for engaging with partner agencies to facilitate discussions that allow all involved parties to:

- Identify shared emerging and future transportation infrastructure needs in key goods movement corridors;
- Develop criteria for establishing priorities and shared solutions for infrastructure needs; and
- Identify funding sources that could support development of infrastructure including, but not limited to, the New Building Canada Plan.

Port Metro Vancouver committed to convening a meeting with all key stakeholders in

the summer 2014.

Cliff Stewart, PMV, referred to an overhead presentation, and offered comments regarding: container movement outside PMV; a framework for engaging with the partner agencies, facilitating discussions on goods movement corridors, developing criteria for establishing priorities, and identifying funding sources to support infrastructure building.

Discussion Session

Questions and comments from WG members are summarised below, with responses from PMV representatives (or those attending on PMV's behalf) in *italics*.

- 1) What do the terms opacity and drayage mean?

Opacity is haziness or "visible dirt" in the air. Efforts are made to stay below 20% opacity. When trucks start up there is often a puff of smoke, but after that, the air should look relatively clean.

Drayage is defined as the transportation of goods via trucks.

- 2) Who is the lead on the transportation strategies referred to?

There are cooperative leads on the transportation strategies. Transport Canada and TransLink also participate. TransLink is the lead on the Regional Transportation Strategy.

- 3) Who leads the Fraser River Transportation Plan (F RTP)?

We are only starting on the F RTP now (Helen Berthin, Ministry of Transportation and Infrastructure). PMV and others will determine how to cooperatively move forward. There are some good examples of where there have been past successes with these relationships and projects.

- 4) Your presentation suggests that increased traffic will improve noise and air quality. It would seem logical that increased traffic would increase noise and reduce air quality. Where is the information to support these conclusions?

Both the Roberts Bank Rail Corridor Program and the South Fraser Perimeter Road projects are examples on how these reductions can occur.

The purpose of the Roberts Bank Rail Corridor Program (RBRC) was to: improve traffic (road and rail) by creating better free flow for traffic; improve safety (by removing interactions at grade road – rail crossings); improve noise (by reducing the whistling and idling of auto/truck traffic at grade road – rail crossings); and, improve air quality. RBRC was a cooperative effort launched about ten years ago, when the Deltaport Third Berth and the first iteration of RBT2 were presented, to deal with out-of- scope concerns that government and the public had (related to the Third Berth Project and original Terminal Two). Now we have hard infrastructure to be delivered – we can see the methodology that works well to address these concerns.

SFPR was delivered by the province with funding from the federal government, to

address future traffic requirements of port-related projects, and to address concerns of traffic on the ground. The free flow of traffic through George Massey tunnel improved after the SFPR opened, reducing congestions (and associated noise and air quality emissions).

- 5) Aboriginal "consultation" includes defining the consultation process with First Nations. When will this begin?

Consultation with Aboriginal Groups began in 2010/2011, and will continue to be a separate stream with meetings held as part of First Nations consultation. This workshop is not intended to represent First Nations consultation.

- 6) From a First Nations' perspective we need information on cumulative effects and what it will do to harvesting on water and lands.

The purpose of these WG discussions is not specifically to address Aboriginal concerns. In advance of meeting separately with First Nations, PMV is just trying to set the framework to understand how we anticipate change. This is the early part of the process to identify issues and get feedback. We are still generating information that may help answer some of your questions. PMV will engage in Aboriginal consultation and we will discuss our proposed methodology and hear directly from potentially affected groups their interests and issues on this subject.

7. CONTAINER MOVEMENT OUTSIDE PMV JURISDICTION

Wade Major, Project Controls Manager, WorleyParsons, referred to an overhead presentation, and commented regarding: regional ship traffic; average daily movements for 2030; regional road traffic predictions for 2030; and, regional rail traffic average day movements anticipated in 2030.

It was noted following this presentation that Dennis Bickel, Port Metro Vancouver had arrived and could answer any questions on transportation- related initiatives.

Discussion Session

Questions and comments from WG members are summarised below, with responses from PMV representatives (or those attending on PMV's behalf) in *italics*.

- 1) When you add up B.C. ferries and container traffic (on slide # 80), there is a difference to the total. What is the balance?

In addition to B.C. Ferries and container ships, there are bulk vessels (which carry bulk commodities), cruise ships, fishing vessels, gas carriers, and other large vessels that make up the difference.

- 2) Does the data shown include recently proposed Projects?

This dataset does not include the TransMountain pipeline Project. Another dataset

adds another 300 ship calls for that particular Project. We will consider these along with future traffic assumptions with the Project, future traffic assumptions without the Project, and cumulative effects.

- 3) Column A shows traffic without RBT2. Is it assuming the third berth is in place and additional growth in the region has occurred?

It is indicated as Deltaport being "complete" (including DTRRIP) and operating at full capacity.

- 4) Why is the Patullo Bridge excluded from the map?

The percentage of RBT2 traffic travelling over Patullo Bridge was very low at that point. If you look at Highway 91 north of Delta, you're down to 0.4% traffic increase from RBT2.

- 5) Is the data shown assuming the new George Massey bridge is in place, or the existing tunnel?

When this slide was prepared, it was assumed that the tunnel was in place with 4 lanes, and with its current counterflow lane during peak periods.

- 6) What happens if vessels arrive early? Do they anchor?

Container ships operate on a schedule, much like an airline. It is very rare for a container ship to have to anchor. There are scheduled berth windows. Ships come from across the Pacific, and can adjust their speed to meet their commitments to avoid having to wait for a berth. Ships arriving from Asia typically go to Seattle, Tacoma and Vancouver. We often see the same ship every 5 or 6 weeks.

- 7) Do container ships pick up pilots in Victoria and will there be sufficient pilots available to facilitate additional traffic due to the Project?

Every foreign vessel picks up a pilot in Victoria, until they berth. Ships are under the direction of a B.C. coast pilot while in B.C. waters. Efforts will be made to ensure that enough pilots will be available in future.

- 8) Can WG participants obtain an electronic copy of the workshop's slide presentations?

The information in the presentation slides is still preliminary and not yet available for release to the WG.

Break: The meeting recessed at 12:10 p.m. and reconvened at 1:00 p.m.

8. APPROACH TO THE ENVIRONMENTAL ASSESSMENT (EA)

Celesa Horvath, Ventus Development Services Inc., addressed the methodology of EAs and how the EA for this Project was determined, including; identifying valued components (VCs) through the issues scoping process; selected VCs (e.g. marine vegetation, fish and mammals) and sub-components (e.g. shellfish, whales); and how

cumulative effects are approached and how significance of effects is assessed in the context of EA.

Discussion Session

Questions and comments from WG members are summarised below, with responses from PMV representatives (or those attending on PMV's behalf) in *italics*.

- 1) Is there a timeline for deciding whether to invoke a provincial EA and implement a harmonised EA with the federal government?

The province has not made a decision on EA and there is currently no timeframe for making a provincial decision but it was noted that the majority of issues identified for EA are in federal jurisdiction. The provincial Environmental Assessment Office is working with the CEA Agency and PMV to determine an efficient path forward and is participating in the WG process with other provincial agencies, such as the Ministry of Transportation and Infrastructure.

- 2) If the province gets involved in conducting an EA, how will it impact the EA process?

Answer provided by the EAO: The EA process is not likely to change much as the same overall process applies whether it is a federal, provincial or joint assessment. The EA methods are well established and will not change but the content may change slightly in some circumstances.

- 3) Are there more opportunities for WG member's involvement in setting the scope of assessment? A Response by the CEA Agency:

"There is always a mechanism to amend documents. However, the CEA Agency issued the guidelines, but the Minister of Environment will issue the Terms of Reference for the Joint Panel which will confirm its scope. It is important to continue to have these conversations and to be confident that concerns will be addressed (inside the EA or associated process). Input on the process can be submitted at any time. During the Panel Terms of Reference comment period is an effective time to comment."

- 4) If a cumulative effects assessment is needed, will the assessment look at intermediate components (ICs), such as air quality, to determine how they feed through into the VC?

Yes, based on how cumulative effects occur. Depending on the source and nature of the cumulative effect, a cumulative effects assessment will be conducted for ICs to inform VC effects assessments.

- 5) What is the intermediate component?

Air quality, noise, etc. are proposed as ICs. Changes to ICs from Project components and Project-related activities will be modelled and assessed in the EIS. How those changes could affect a number of aspects of the environment will also be assessed. The intermediate steps on the effect pathway will be described in the EIS.

9. AIR QUALITY STUDY

Dan Hrebenyk, SENES Consultants Limited, led the meeting in a review of an overhead presentation, and commented regarding air quality: observations at Roberts Bank and in Tsawwassen; objectives for existing and future conditions without RBT2; and, criteria from various agencies for evaluating air quality (e.g. Environment Canada, Ministry of Environment, Metro Vancouver, Alberta Environment and Sustainable Resource Development, and Ontario Ministry of the Environment and Climate Change).

He confirmed that meteorological data to be used would be based on the WRF-NMM model and the CALMET/CALPUFF Model. Comments were also offered on wind information from the Vancouver Airport 2008-2012; receptor locations which measured 8 priority substances and 8 common air contaminants; and, modelling results for SO₂, NO₂ and PM_{2.5} (including 2010 conditions and conditions in 2025 without the Project).

Discussion Session

Questions and comments from WG members are summarised below, with responses from PMV representatives (or those attending on PMV's behalf) in *italics*.

- 1) Why is meteorological data based on two different models?

Meteorological data from a large area of B.C. and Washington State is needed to prevent 'edge' effects to the model data. The larger model is run on a coarse resolution, and then scaled down to a finer resolution to pick up resolution of topography and land water boundaries closer to the local study area.

- 2) What will the air quality impact of the Project be on the southern Gulf Islands?

The preliminary view is that the drop in concentrations with distance is exponential and too small to differentiate from background levels at that distance (i.e., >30 km from Roberts Bank). It is anticipated that the changes in air quality will not extend beyond the local study area and therefore would not reach the Gulf Islands. The air quality assessment model outputs will provide predicted results to support this preliminary view.

- 3) Will ozone be modelled as part of the study? Any decision on the extent of work needed to assess ozone would need to be justified and well-described.

PMV will do a first order assessment of ozone. We are expecting a small increase in hydrocarbon emissions and a decrease in NO_x emissions. We are not looking to do a full chemical analysis for the Fraser Valley, as it is not deemed to be necessary given Project-related changes in emissions. The net effect on ozone will be

negligible and likely to fall within the expected level of uncertainty of any photochemical model analysis.

- 4) You mentioned preliminary results. Are you planning to do an assessment based on B.C.'s current air quality objectives?

We are using the objectives already adopted. If we are made aware of objectives that are soon to be adopted, we can consider them.

- 5) The national ambient air quality objectives are considered out of date. It would be helpful to use the World Health Organization (WHO) objectives.

The information will be available and can be compared to the WHO objectives. If you're referring to SO₂, we are well-below WHO objectives today and will be even lower in the future.

- 6) One of your slides showed the study area. Is this the local study area, defined by the boundary of the effects?

This is the area in which we will be predicting air quality concentrations. If the concentrations are more than 10% of the air quality objective as we get near the edges of the area, the study area boundaries will be enlarged to consider those effects. Based on our current understanding of the preliminary results, and previous air quality assessments at Roberts Bank, it is not necessary.

- 7) The threshold is measurable. Where air emissions are measurable, the cumulative effects should be considered.

The results from the air quality modelling will be used by other practitioners to look at how changes to air quality affect other valued components, such as human health. These VC assessments will dictate whether or not further information is required. If that is the case, a cumulative effects analysis for the AQ component will be conducted.

- 8) What would the cumulative effects pertain to?

The cumulative effects we are referring to are on valued components (VCs). If changes in air quality are expected to affect human health, there would be a cumulative effects assessment on human health, informed by the assessment of AQ, including a cumulative effects assessment analysis if required.

- 9) How PMV defines VCs, may not be supported by other agencies. There could be a demand to do a cumulative effects assessment even without anticipated impacts to human health.

Intermediate components can include the input of other Projects. You cannot separate emissions by Project or activities within the area so you are actually considering cumulative effects during the evaluation of existing and future

conditions.

- 10) During the morning portion of the session, Projections were based on 2030. Why in this presentation do you compare to 2025?

Depending on a variety of factors, the terminal could reach full capacity anytime between 2025 and 2030. We anticipated that the terminal may be operating at full capacity in 2025. The number of trains and trucks is the same throughout the operating phase. It is anticipated that 2025 will be a conservatively representative year for the operating phase because there will be slightly more older ships in the fleet in 2025 than in 2030. Ship emissions in 2030 would be expected to be lower than in 2025.

- 11) I am interested in maximum daily and hourly averages. Which could feed into an annual average?

For anything with annual criteria, the average scenario would apply.

- 12) You explained model validation and noted that a lot of estimates are over by a factor of two. How will you explain to the public that the model and validation won't add up?

When we compare predicted and observed values, they are for a "what if" scenario that is conservative. That will be explained in the EIS. The actual concentrations will be lower than the model predictions.

- 13) Can you comment on the regional study area?

PMV will be looking at some regional effects, but not as part of this assessment. As far as the scope of the assessment, we will take into consideration the cumulative effects in the area. For the Air Quality Assessment, emissions from both existing and incremental (certain and reasonably foreseeable) road and rail traffic, including both local and Port-related traffic, in the Regional Assessment Area (which includes Delta and most of Richmond) will be included in the modelling of existing and future conditions.

- 14) Are you saying the effects of ships on air quality outside the local study area, would be included in the cumulative effects assessment?

If there were residual effects on the VCs, the effects of the Project and how it combined with other components, such as ships, would be considered as part of a cumulative effects assessment.

- 15) Environment Canada has an international agreement with the U.S. on shared science and will determine what its needs are with respect to the study outcomes. Within the EIS, we are not limiting the study of air quality. The outcomes from Project-related changes do not remain on the Canadian side of the border.

PMV noted that transboundary effects will be considered within the EIS. PMV is currently in discussions with the CEA Agency on this topic.

16) Are you suggesting that marine emissions will be studied within the study area only?

Any ships maneuvering adjacent to the Roberts Bank terminals were included in the assessment. Ships outside of PMV jurisdiction would not factor into the results presented earlier in the presentation. They will be assessed separately.

There is an international shipping lane in the area. Similarly with increased road and rail traffic where emissions overlap with others, we will consider these and other emission sources.

17) Will you look at ship transit within the study area? If there are residual health impacts and a human effects assessment is done, will you consider impacts of ship traffic in future?

Emission levels decline rapidly with distance from the source. The ships will be modelled as part of the assessment of cumulative change. Based on other studies, we will know what their impacts are anticipated to be.

18) Increased vessel traffic from Kinder Morgan's Project as well as other Projects, including growth at Westshore Terminals, and the effects of this traffic combined with RBT2 is of concern to Aboriginal groups.

Westshore Terminals is included in the blue box area of the figure and included. Traffic increases and other assumptions have been incorporated into the model presented. If Kinder Morgan or another Project has conducted an air quality assessment, we will consider how their emissions combine with RBT2 emissions.

Break: The meeting recessed at 2:45 p.m. and reconvened at 2:55 p.m.

Ms. Horvath clarified that if there was a residual effect on any VC (human or marine health), efforts would be made to examine the IC component to ensure other projects and activities that could contribute to the cumulative effect on that VC, were duly considered.

10. NOISE AND VIBRATION STUDY

Andrew Williamson, Wakefield Acoustics, and Clair Wakefield (via teleconference) led the meeting in a review of an overhead presentation and commented regarding: goals of the noise and vibration studies; a residential survey intended to help identify concerns; the purpose, components and methodology of a study which helped identify issues related to noise and vibrations; background vibration levels recorded below the threshold of human perception; and, effects of meteorology on sound propagation.

Discussion Session

Questions and comments from WG members are summarised below, with responses from PMV representatives (or those attending on PMV's behalf) in *italics*.

- 1) Why are the effects of noise and vibration over the water not as well understood as the effects of noise and vibration over land?

While the mechanisms of sound propagation over land and over water are similar, there is less scientific knowledge about sound propagation over water in various weather conditions. For the technical report related to sound propagation over water we reviewed literature on the topic and used computer modelling, to help address concerns of Tsawwassen residents of reported higher noise levels during certain conditions.

- 2) Could you explain your suggestion that local truck and train events were above the threshold of perception?

For ground-borne vibration: 93 dB re 1 nm/s is considered the threshold of human perception. Maximum levels measured for truck and train events were in the range of 95-116 dB re 1 nm/s.

- 3) When Deltaport was constructed there were a lot of noise complaints from Tsawwassen residents. Was the Deltaport construction noise monitored and recorded and would it be useful in the current study?

Post-Meeting Note: Noise monitoring was conducted during dredging operations during the construction of Deltaport Third Berth (monitoring period, January - June 2007), with additional noise monitoring conducted in July 2007. The RBT2 noise and vibration consultant (Wakefield Acoustics) has reviewed the data and incorporated it as part of the assessment.

- 4) Information on the impacts of vessel noise and vibration on whales and other species is needed. Kathleen Johnnie indicated that underwater vessel noise and vibration could be felt before ships were evident in her area of the Gulf Islands and that more information on these effects is needed.

There are underwater noise specialists involved in RBT2 to assess effects on marine creatures. A separate underwater noise study is underway.

- 5) Do you have a sense of what monitoring / mitigation might be considered as a result of work to date?

PMV is still in the early stages of examining effects and does not have this information.

6) What effect does noise have on birds?

The bird experts can be available at future WGs to answer these and any other related questions.

Post-Meeting Note: Noise on birds will be assessed in the EIS.

11. CLOSING AND NEXT STEPS

Garry Alexander acknowledged that PMV welcomed feedback on the discussion. PMV is looking for feedback from the WG on topics for future WG meetings.

Post-Meeting Note: The next WG meeting is scheduled for May 27, 2014 and based on the number of comments received during WG#2, it will be focused on Valued Component Selection and Approach to Cumulative Effects Assessments.

The following questions and comments were noted:

1) It would be helpful if the next meeting included the job titles of the participants, in the attendance list.

Efforts will be made to add job titles in future documentation.

2) A better understanding of the regulatory context for RBT2 is required particularly with respect to cumulative effects considering the many large development projects currently being proposed with vessel traffic components in the area.

There has not been a regulatory change with respect to cumulative effects assessment or the methodology. The next WG meeting can include more information on the approach to cumulative effects assessment.

3) An explanation of how cumulative effects will be addressed within the subject areas would be helpful.

We can talk about VCs and cumulative effects as the review proceeds.

4) Will there be an opportunity to submit written comments on the draft Panel Terms of Reference and the EIS?

The CEA Agency will prepare a draft Terms of Reference for the review panel, which will clarify the scope of the Project and the assessment. It will layout legislative responsibilities of government, and describe how the panel will be appointed. That document will be available in draft form for comment.

When the EIS is submitted, it will be available for public comment, prior to the panel's appointment. The comment period will seek comments on whether the EIS

is complete and all information requirements have been met – a “completeness review”. The panel will be appointed and then undertake the EA. They will seek input on all aspects of the EIS. There will be at least three opportunities for written participation. There will likely be other levels of government participation and review.

- 5) More dialogue with First Nations is needed as part of this process, separate from the WG process. First Nations can provide input on issues and concerns that need to be addressed as part of the EA and need to be heard. First Nation representatives have to report back to their communities with information that is clear and understandable. The WG process is part of providing this level of understanding but more discussions are needed. Studies of Aboriginal concerns are needed to inform some of the WG topics presented and proposed.

Agreed, there is a First Nation consultation process that has to be followed. PMV can discuss with you and others how best to proceed. We understand that a lot of technical information needs to be presented to people who are not technical experts. We will hold discussions on how best to make this happen. The EIS guidelines require that information needs to be shared in a form that is understandable.

Participants were welcomed to submit comments to Garry Alexander at dgarryalexander@gmail.com. Alternatively, feedback could be sent directly to PMV at container.improvement@portmetrovanancouver.com. Thanks were extended to the presenters for sharing their concepts and methodology, and to delegates for sharing their questions and comments.

CONCLUSION

The Roberts Bank Terminal 2 Project (RBT2), WG Workshop #2 concluded at approximately 4:00 p.m.

INFORMATION PROVIDED

The following information items were provided at the meeting:

- Agenda for the Roberts Bank Terminal 2 Project, Working Group (WG) Workshop #2 scheduled Tuesday, April 15, 2014
- Roberts Bank Terminal 2 Working Group #2 Question Form
- Ledger-sized map of the Lower Mainland showing “Average Day Train Movements in the Year 2030”
- Ledger-sized map of the Lower Mainland showing “Total Vessels in the Year 2030”
- Ledger-sized map of the Lower Mainland showing “Average Day Movements in the Year 2030”

- Ledger-sized chart showing “Intermediate Component and Valued Component Linkages”
- Flowchart titled “Valued Component Selection Process”
- Chart titled “Selected Valued Components and Sub-Components”

Post-Meeting Note: Attendees were sent a PDF copy of WG#2 presentations on April 30, 2014.