Hearing Order OH-001-2014
Trans Mountain Pipeline ULC (Trans Mountain) Application for the Trans Mountain Expansion Project
Motions to compel full and adequate responses to the second round of intervenor information requests (IRs)

IR #	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate	Trans Mountain's response to motion
2.01.1(a)	Have any specific locations been identified as places where an incident command post (ICP) could be set up specifically to deal with a spill in Burrard Inlet? If specific ICP locations have been identified please provide the location and details, including information regarding the space(s) proposed and required resources.	Kinder Morgan Canada Inc. (KMC) acknowledges the interest of the District of North Vancouver to seek more information about the existing emergency management program (EMP) documents, and reference materials related to the Trans Mountain Pipeline System, which is why KMC filed a redacted copy of the existing Emergency Response Plans publicly. In Ruling No. 50 (Filing ID A4G519) the National Energy Board (NEB) determined that it was "satisfied that sufficient information has been filed from the existing EMP documents to meet the Board's requirements at this stage in the process." Although the information requested is not within the scope of this proceeding and not relevant to the NEB's List of Issues, KMC offers the following response to your question. Kinder Morgan Canada Inc. (KMC) has pre-designated potential Incident Command Post (ICP) and Staging Area locations along the current pipeline corridor and in communities where its facilities are located. Access to these facilities, and the lead time required varies depending on the location and type of facility being used. Specifically KMC has identified resources in the following communities; In British Columbia Burnaby, Richmond, City of Vancouver, Abbotsford, Chilliwack, Hope Merritt, Kamloops, Clearwater, Blue River, Valemount, and in Alberta Jasper, Hinton, Edson, Gainford, Edmonton, Sherwood Park. KMC has agreements and protocols in place where appropriate with the service providers. All facilities meet the requirements for internet and telephone connectivity, food, lodging, meeting space, parking and security for a multi-agency response. The Application, Volume 7, Section 4.8 outlines the process to enhance Kinder Morgan Canada's (KMC) existing emergency management programs (EMP) as they relate to the Trans Mountain Pipeline system to address the needs of the Project (Filing ID A3S4V5). The final programs will be developed in a manner consistent with the National Energy Board's (NEB or Board) draft conditions related to emergency response (Filing ID A3V8Z8).	This question was not adequately answered. Further, contrary to KMC's statement that the information requested is not within the scope of this proceeding and is not relevant to the NEB's List of Issues, the District's view is that the information requested is within the scope of NEB's list of issues – see Issue #5, Issue #11, Issue #12. KMC states in its response that it will only have one incident command post for an incident. The District of North Vancouver (the "District") is seeking to understand where the pre-designated potential Incident Command Post (ICP) Is located. The IR response is generic and lists communities. It does not answer our question on the potential location and details, including information regarding the space(s) proposed.	Yes, specific locations have been identified as places where an incident command post (ICP) could be set up specifically to deal with a spill in Burrard Inlet. Trans Mountain believes the information requested is not within the scope of this proceeding and is not relevant to the NEB's list of issues, however to provide more clarification on the types of spaces without providing the specific service provider the spaces must have: • at least 3 meeting spaces preferably 5, • have at least one large meeting space of at least 1000 ft^2, • the ability to secure the location, preferably catering on-site or a secure way of receiving deliveries, • preferably with accommodations on site or the ability to securely park vehicles and/or load/unload passengers from busses at a nearby location, • secure and strong internet connection, fax and at least 2 telephone lines, and • strong cellular telephone signal. Although only one ICP will be activated, consistent with the application of ICS, KMC does have a full team of Liaison Personnel that may be dispatched to multiple external Emergency Operations Centres (EOC), and depending on the size and nature of an incident may choose to open its own EOCs or Regional Command Centres.
2.01.2(a)	Would an emergency related to a marine vessel in Burrard Inlet, such as an oil spill into the water and/or vessel fire on the water, have the potential to require public evacuations in the District of North Vancouver? If so, please	Emergencies such as a large tanker spill or fire are low likelihood events and depending on the situation, the party deemed the 'responsible party' would undertake to respond in a suitable manner using Incident Command System (ICS). Trans Mountain is not a vessel owner or operator and in cases of ship- related	The District appreciates the general information and overview that Trans Mountain has provided regarding the use of the Incident Command System in emergency response.	Trans Mountain thanks the District of North Vancouver for the additional clarification provided in their motion request. Based upon the clarification, "whether an oil spill in Burrard Inlet may require public evacuations in the District of North Vancouver", Trans Mountain responds as follows:

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	provide details on the range of emergency scenarios encompassed by the Trans Mountain Emergency Response Plan that could require public evacuation in the District of North Vancouver. Where possible, please provide maps showing the extent of the potential evacuation area(s) for each scenario.	incidents, such as a marine oil spill or fire onboard, Trans Mountain would not be considered the responsible party. Larger events are typically managed by a Unified Command acting within the framework of the ICS. ICS is a flexible system with four sections operating in assigned roles under the Command staff. The ICS structure is malleable and varies to suit the needs of the response, however a typical organization will be composed of the following elements: • UNIFIED COMMAND (Federal, Provincial and Local Government; Responsible • Party; Local Emergency Services, First Nations, others as required) • OPERATIONS SECTION • PLANNING SECTION • LOGISTICS SECTION • FINANCE SECTION Utilization of ICS allows industry, response organizations and others to effectively respond in a comprehensive and joint manner during emergencies. The British Columbia Ministry of Environment offers a detailed discussion of ICS, which includes the following statement regarding the role and responsibilities of local government (see District of North Vancouver IR No. 2.01.2a-Attachment 1): *Local government has a responsibility to assess local risks, prepare emergency response plans, and to have a delivery capability commensurate with the types and level of hazard that exist in their community. When an emergency occurs, response normally begins with local government (e.g. local fire department) and a bottom up escalation takes place if resources are insufficient. Local governments may be represented within the Incident Management Structure if affected by a large, complex incident.* Trans Mountain has completed a comprehensive risk assessment for a marine spill and has concluded that the Project changes little in this regard. Potential consequences already exist and the risk assessment shows that the credible worst case event for Burrard inlet is a 100 m3 spill during cargo transfer at the Westridge marine terminal, which would largely be contained by the pre-deployed oil spill containment boom. The risk assessment shows the probability of such an event occurring is once in 234 years. As a result, Trans Mountain believes that the TMEP project will not place material additional demands on municipal operational	However, it has not answered the specific question which is whether an oil spill in Burrard Inlet may require public evacuations in the District of North Vancouver. Trans Mountain quotes the BC Ministry of Environment as follows: "*Local government has a responsibility to assess local risks, prepare emergency response plans, and to have a delivery capability commensurate with the types and level of hazard that exist in their community*." It is for precisely these reasons, i.e. in order to assess local risks, prepare emergency plans, and have capacity to deliver emergency response, that the District needs to know whether evacuations may be needed in the event of a spill and, if so, the extent of such evacuations. Accordingly, the District is requesting information regarding (i) whether evacuations may be required; (ii) the range of emergency scenarios that could require evacuation and (iii) maps showing the extent of potential evacuation areas. This information is required to enable the District to fulfill its emergency response planning responsibilities.	A credible worst case oil spill scenario in Burrard Inlet, the only location where a spill could impact District of North Vancouver, has been estimated by DNV as 103 m^3, occurring during a cargo loading event at Westridge where the tanker is pre-boomed. Trans Mountain believes that a spill at Westridge of this size will not require evacuations in the District of North Vancouver. However, for added clarity, Trans Mountain reiterates that KMC does not have the authority to order evacuation, and/or conduct the evacuation of residents, schools, daycares, hospitals, businesses, parks, recreation facilities, and other public/private places, nor does it have the authority to close roads, redirect traffic, public transit and other transportation related infrastructure. KMC agrees with the interpretation of the federal, provincial and municipal legislation dealing with emergency programs.

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		resources and services. Trans Mountain expects that the role of local governments would be determined by the geographic extent of the incident in relation to their jurisdiction and be guided by their regulatory powers. For example, local governments typically have authority to order and conduct evacuations and to close roads, redirect traffic, public transit and other transportation related infrastructure. KMC agrees with the interpretation of the federal, provincial and municipal legislation dealing with emergency programs. Trans Mountain has an ongoing program to provide Community Awareness Emergency Response (CAER) sessions to first responders along the pipeline system. These sessions provide information with regard to the type and properties of petroleum transported through the pipeline and how to respond safely. These sessions along with regular exercises provide Trans Mountain the opportunity to maintain working relationships with first responders and to ensure mutual awareness of response programs. Trans Mountain has always been committed to working collaboratively with organizations, both public and private, to ensure there is a mutual understanding how the pipeline and/or operations at facilities could impact those organizations. We are willing and able to review emergency response plans, share information on our operations, and provide advice on proper response techniques. External agencies are invited to participate in emergency response exercises, continuing education programs, and consultation meetings. KMC covers the costs associated with instruction, but does not currently cover costs associated with attendance, such as responder wages, benefits and employment costs. Trans Mountain also encourages the District of North Vancouver to contact WCMRC about their oil spill preparedness training. Local municipalities are invited to participate as stakeholders, observers or within an Incident Command System section. For example, WCMRC has invited representatives to these exercises from the Canadian Coast Guard, Environment Canada, British Columbia Ministry of Environment, Transport Canada, First Nations, local governments, Royal Canadian Mounted Police officers, health services, including ambulance services, fire services, local emergency planners and customs/border services. Province of British Columbia, Ministry of Environment. No date. Spills and Environmental Emergencies. Website: http://www.env.gov.bc.ca/eemp/resources/icsintro.htm. Accessed: January 2015.		

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2.021.2(c)	Chapter 2.14 of the Emergency Response Plan - Westridge Marine Terminal (Ref. (i)) lists the private "Support Services" that will be called on in the event of a spill. Please provide the response times for the arrival to a spill and/or fire for each of the support services listed in Tables 2.14.1 and 2.14.2.	Kinder Morgan Canada Inc. (KMC) acknowledges the interest of the District of North Vancouver to seek more information about the existing emergency management program (EMP) documents, and reference materials related to the Trans Mountain Pipeline system (TMPL system) which is why KMC filed a redacted copy of the existing Emergency Response Plans (ERP) publicly. In Ruling No. 50 (Filing ID A4G519), the National Energy Board (NEB) determined that it was "satisfied that sufficient information has been filed from the existing EMP documents to meet the Board's requirements at this stage in the process." Although the information requested is not within the scope of this proceeding and not relevant to the NEB's List of Issues, KMC offers the following response to your question. KMC has contractual relationships with contractors able to promptly supply additional equipment and personnel during any type of emergency including fire events. KMC has not disclosed the names of contractors or service providers for privacy reasons. Westridge Marine Terminal operations are equipped to provide immediate response in the event of a spill. The loading operations are enclosed within a boom, additional response equipment is kept on site and personnel are trained based on KMC as the operator Westridge ERP's. With respect to incident response times in marine environments, as noted in the Application, Volume 8A, Section 1.4.2.5 (Filing ID A3S4X3), Western Canada Marine Response Corporation (WCMRC) is federally mandated, through Transport Canada, under the *Canada Shipping Act*, to provide emergency preparedness and response services in the event of an oil spill into the marine environment on the West Coast of British Columbia. Within the Application, Volume 8A, Section 5.5.1.1 (Filing ID A3S4Y6), federally mandated response times are outlined in Table 5.5.2 (Filing ID A3S4Y6): WCMRC Response Time Planning Standards. Trans Mountain Pipeline ULC (Trans Mountain) in consultation with WCMRC has proposed reduced response times, as noted in Volume 8A, Table 5.5.3 (Filing ID A3S4Y6): Proposed Improvements to WCMRC's Emergency Response Capacity, of the Application. It is important to note there are differences between planning standards and actual response times. The former are established by Transport Canada and represent a maximum threshold. Actual response times are expected to be less. As summarized in the referenced table(s), federally mandated acceptable maximum response times, ranging from 6 hours – 72 hours, are dependent upon the size of the spill and geographic location of the impacted area. Proposed improvements will reduce the response times to 2	Question not answered. KMC states that it has not disclosed the names of contractors or service providers "for privacy reasons", but does not give any explanation as to what those privacy reasons are or why the company names of contractors being counted upon to assist with emergency response should not be disclosed. For the same reasons cited with respect to DNV IR 2.1.2a above, the District requires this information to assist in its emergency planning and to ensure that its citizens are adequately protected. The District is advised that it is standard practice for industry to provide contractor information to local governments for emergency planning purposes and other industry representatives have been open in sharing such information with the District. With respect to response times, KMC has provided general information regarding federal legal requirements as well as the proponent's proposed improvements to response times. The information that the District requires is: what is the response time for the arrival to a spill and/or fire for each of the support services. This has not been answered.	The response times for the arrival to a spill and/or fire for each of the support services listed in Tables 2.14.1 and 2.14.2 have not been defined. KMC notes that these support services are intended to augment KMC's response which would begin immediately upon detection of an incident. Where names of contractors or service providers have been withheld it has been done so because it contains personal contact individuals who may be called upon to respond to an emergency or to protect the commercial interest of the provider. To provide further clarification, we note for the benefit of the District of North Vancouver that in some instances KMC contractors are being subjected to threatening and intimidating tactics and those companies providing emergency response related services to Trans Mountain may have business opportunities put at risk by having their names publicly listed. Where contractor names were not redacted across all the documents we can confirm this was in error. We believe the redacted filing strikes the appropriate balance between safety, security and commercial concerns and the public's desire to know the details of our existing plans. We can confirm that in all instances in which names have been redacted, each of those positions identified are staffed with qualified employees or contractors and appropriate agreements are in place to provide emergency assistance services as needed. As outlined in the response to District of North Vancouver IR No. 2.01.1b, the process for consultation and updates to the existing emergency management program (EMP) including the commitment to invite the District of North Vancouver to participate in consultation as described for the Project. KMC wishes to reiterate our offer to the District to review unredacted copies of the existing EMP documents as part of the consultation to inform the revised plans for the expansion.

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		hours – 36 hours within the Increase Response Area described in the Application. The Application, Volume 7, Section 4.8 outlines the process to enhance KMC existing EMP as they relate to the TMPL system to address the needs of the Project (Filing ID A3S4V5). The final programs will be developed in a manner consistent with the NEB (or Board) draft conditions related to emergency response (Filing ID A3V8Z8).		
2.02.1.2(d)	Please provide a list of the mutual aid agreements which Trans Mountain has in place or is relying on for firefighting resources and specify what firefighting resources are to be provided pursuant to each such mutual aid agreement, including equipment and personnel.	Although the information requested is not within the scope of this proceeding and not relevant to the National Energy Board's (NEB) List of Issues, Trans Mountain Pipeline ULC (Trans Mountain) offers the following response to your question: Kinder Morgan Canada Inc. (KMC) is committed to ensuring a prompt and immediate response to any fire event that involves Trans Mountain Pipeline (TMPL) or facilities to protect the public, employees, environment, and property. In the low likelihood event of a hydrocarbon fire at Burnaby Terminal or Westridge Marine Terminal KMC will respond using on-site trained personnel, and third party responders, if required. KMC has contractual relationships with contractors able to promptly supply additional and personnel during any type of emergency including fire events. KMC has not disclosed the names of contractors or service providers for privacy reasons. Mutual Aid agreements are useful tools in emergency planning; however, KMC does not rely upon the agreements for initial response actions. KMC is involved in a number of mutual aid agreements, which generally are evergreen without an end date, however are reviewed annually. Regardless of the outcome of Trans Mountain Expansion Project (the Project), KMC is interested in pursuing mutual aid agreements with fire departments that are situated to provide rapid response to TMPL facilities. Refer to response to District of North Vancouver IR No. 2.01.1b, which outlines the process for consultation and updates to the existing emergency management program (EMP) including the commitment to invite the District of North Vancouver to participate in consultation as described for the Project.	Question not answered. Effective emergency response planning can only take place when the local government knows who the other participants are and what resources they bring. See comments re. DNV IR 2.01.2c above.	KMC does not have mutual aid agreements for fire-fighting. As stated in the original response: Mutual Aid agreements are useful tools in emergency planning, however KMC does not rely upon the agreements for initial response actions. In the area of fire fighting KMC has contractual relationships with contractors to supply additional personnel during these types of emergencies.
2.01.2(f)(i)	What is the role and expectations of the District of North Vancouver and NSEMO in Trans Mountain's emergency exercises and training programs?	As outlined in the response to District of North Vancouver IR No. 2.01.1b, the updated EMP depends upon the final detailed design of the Project, a process which will not be carried out unless the Project receives approval and until KMC has an opportunity to review the conditions of such approval, the updated EMP which includes the training program cannot be provided during the NEB's regulatory review of the Project.	The District has only this opportunity during the NEB hearing process to question and challenge elements of the Project. It cannot properly participate in the process without full and complete information about emergency planning, which, as outlined in our comments above, is a key concern for the District.	KMC has always been committed to working collaboratively with organizations, both public and private, to ensure there is a mutual understanding how the pipeline and/or operations at facilities could impact those organizations. We are willing and able to review emergency response plans, share information on our operations, and provide advice on proper response techniques. External agencies are invited to participate in

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		However, to ensure affected parties have the opportunity to express concerns and provide input which will inform the updated EMP, KMC will conduct a consultation program as part of developing the updated EMP as described in the NEB draft conditions related to emergency management. Furthermore, in the response to District of North Vancouver IR No. 2.01.1b KMC makes the commitment to invite the District of North Vancouver to participate in the consultation process.	Consequently, it is not adequate for KMC to say that it will "conduct a consultation program as part of developing the updated EMP". This is the District's one opportunity to put forth its concerns and seek conditions from the NEB with respect to this Project. In order to meaningfully participate in this process, it is vital for the District to have a full and complete understanding of the question asked: "What is the role and expectations of the District of North Vancouver and NSEMO in Trans Mountain's emergency exercises and training programs?"	emergency response exercises, continuing education programs, and consultation meetings. KMC covers the costs associated with instruction, but does not currently cover costs associated with attendance, such as responder wages, benefits and employment costs. KMC typically asks potentially directly affected municipalities to participate in exercises that could directly impact their community, and offers training opportunities. Indirectly affected municipalities are usually given the opportunity to participate in or observe exercises that could have impacts to their communities. Additionally KMC participates in municipal exercises providing inputs that could be relevant during an incident related to our operations. Trans Mountain cannot speculate as to how the District of North Vancouver and NSEMO would like to participate in the training and exercise program. In the response to District of North Vancouver IR No. 2.01.1b KMC makes the commitment to invite the District of North Vancouver to participate in the consultation process.
2.01.2(f)(ii)	How will lessons learned from emergency exercises and training programs be shared with and communicated to municipalities and their emergency responders?		See comment re. DNV IR 2.01.2(f)(i) above.	After an exercise a debrief session occurs whereby participants share and discuss lessons learned. If there are significant findings which require follow up, KMC conducts that follow up and will share the results with participating agencies at their request.
2.01.2(f)(iii)	How will municipal emergency services be integrated into training and exercise programs and ultimately into Trans Mountain's Emergency Plans?		See comment re. DNV IR 2.01.2(f)(i) above.	As outlined in the response to District of North Vancouver IR No. 2.01.1b, KMC makes the commitment to invite the District of North Vancouver to participate in the consultation process. Please also see the Trans Mountain's motion response to 2.01.2(f)(i) above.
2.01.3(a)	Please provide details on previous Trans Mountain/Kinder Morgan Canada emergency response exercises specifically rehearsing the use of unified command and the response to a theoretical marine spill due to a seismic event at Westridge Marine Terminal.	Trans Mountain understands that the District of North Vancouver is seeking detailed information in regard to emergency response measures for a variety of situations that could occur related to the Project, as well as existing operations. Regardless of the manner the spill occurred, the response remains structured and in accordance with ICS principles. Therefore, the exercises do not specifically itemize cause as a seismic event. Page 18 of 145 Trans Mountain Response to District of North Vancouver IR No. 2 Refer to the response to NEB IR No. 1.69a (Filing ID A3W9H8) for a list of historical exercises which includes the participants and a description of the scenario exercises. Specifically the last full scale exercise that involved the Westridge Marine Terminal was held on November 28, 2012 with the Incident Command Post in	With respect to the historical exercises referred to in the response and the comment in the response to DNV IR #2.01.3(b) that "it does not appear that the District of North Vancouver has participated in past exercises", please confirm whether the District of North Vancouver been invited to a previous Trans Mountain/Kinder Morgan Canada emergency response exercise specifically rehearsing the use of unified command and the response to a theoretical marine spill at the Westridge Marine Terminal?" Please provide details on the lead time for the invitation and if there is follow up information after the exercise if the local government does	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required. In accordance with Board Ruling No. 33 (Filing ID A63066), the request is for new information. Seeking more specific information or more details in the motion to compel full and adequate responses is essentially a request for new information and is not permitted under Ruling No. 33. Rather than seeking to compel a further answer, the Intervenor may file its own evidence in response or provide its views during final argument.

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		Richmond, BC.	not have the capacity to attend in person.	
2.01.3(b)	Please provide copies of key learnings from the debriefing for any past desktops and/or field exercises simulating the effects of a seismic event at Westridge Marine Terminal, including any communication to or support requests for the District of North Vancouver.	Trans Mountain Pipeline ULC (Trans Mountain) understands that the District of North Vancouver is seeking detailed information in regard to emergency response measures for a variety of situations that could occur related to Trans Mountain Expansion Project (the Project), as well as existing operations. Regardless of the manner the spill occurred, the response remains structured and in accordance with Incident Command System (ICS) principles. Therefore, the exercises do not specifically itemize cause as a seismic event. Please refer to response to NEB IR No. 1.69a (Filing ID A3W9H8) for a list of historical exercises which includes the participants and a description of the scenario exercises. In reviewing these exercises it does not appear that the District of North Vancouver has participated in past exercises.	See comment re. DNV IR#2 – 2.01.3(a) above. The question regarding the communication or support requests for the District was not answered. Please provide a response to assist us in understanding how these exercises contribute to improved communication which is key in an emergency event.	As outlined in the original response it does not appear that the District of North Vancouver has participated in past exercises. Therefore, there is no material to provide.
2.01.4(a)	Please provide a list of all emergency management tabletop and full-scale exercises that Trans Mountain has completed with respect to the Westridge Marine Terminal from 2004 to 2009. The list content must include, but not be limited to, the following information: (i) the scope and objectives of each exercise; (ii) the scenario for each exercise; and (iii) the participants, including internal company departments (such as executive, engineering, environment, Trans Mountain facilities and pipeline operations personnel) and external participants (e.g., mutual aid partners, local authority first responders, Western Canada Marine Response Corporation, Environment Canada) that attended each exercise.	Trans Mountain Pipeline ULC (Trans Mountain) has provided detailed information as requested by the National Energy Board for exercises within the past 5 years. Trans Mountain understands the District of North Vancouver (District) is seeking information in regards to the District's own participation in these events, however exercise records dating back over 5 years are not relevant to one or more of the issues identified in the National Energy Board's List of Issues for the Trans Mountain Expansion Project	The District recognizes that Trans Mountain has provided detailed information regarding emergency exercises for the past 5 years and states that records older than that are irrelevant. Simply because the records are over 5 years old does not make them irrelevant. Emergency planners often look back at historical records in developing response plans and such records are often highly informative, regardless of their age. It is the District's view that records from just the past 5 years are inadequate for emergency planning purposes and asks that the records from 2004 to 2009 kindly be provided.	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required.
2.01.4(b)	Please set out the learnings from the exercises and provide evidence of how these learnings were incorporated into Trans Mountain's emergency management program and communicated to Trans Mountain office and field personnel and to local authorities. Who is responsible for the final determination if the exercise demonstrates the adequacy of the existing emergency response program as concluded in the May 23, 2013 and	Refer to response to District of North Vancouver IR No. 2.01.4a.	This question was not answered. Please provide an answer as to who is responsible for the final determination if the exercise demonstrates the adequacy of the existing emergency response program as concluded in the May 23, 2013 and November 7, 2013 learnings.	Although the information requested is not within the scope of this proceeding and not relevant to the National Energy Board's (NEB) List of Issues, Trans Mountain Pipeline ULC (Trans Mountain) offers the following clarification response to your question: The determination of the adequacy of the existing emergency response program is determined by the evaluation team for the exercise and in the professional opinion of the evaluator. KMC's EMP documents are reviewed annually and updated when necessary to reflect changes including learning from

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	November 7, 2013 learnings?			emergency response exercises. Changes are communicated to personnel in various ways including through distribution of the revised manuals and use of said manuals in future exercises.
2.01.5(a)	Has Trans Mountain considered or taken any steps to develop societal risk tolerance criteria to determine what level of risk would be acceptable to residents from the District of North Vancouver and other Metro Vancouver residents potentially impacted by an oil spill in the marine environment? If yes, please provide details of the process and the public involvement specific to the development of such risk tolerance criteria. If no, why not?	Trans Mountain has sought to engage the residents of the District of North Vancouver to understand concerns and interests relating to the project and to communicate the work undertaken as part of Trans Mountain's Facilities Application to the National Energy Board (NEB). As part of that Application, a comprehensive risk assessment on marine spills was conducted and reported in, Volume 8C, TERMPOL Reports, Section 3.15 (Filing ID A3S5F4). This included a quantitative risk assessment conducted by Det Norske Veritas, which considered regional traffic growth, navigational hazards, vessel construction, and risk controls provided under the existing safety regime determined the probability of an oil spill resulting from a Project tanker. Based on an assessment of the tanker transit route, the report identified potential locations for accidents, including a location within Burrard Inlet at the Westridge Terminal. The report quantified the probability of oil spill incidents and the potential consequence of these incidents in terms of spill volume. This assessment was conducted for the Facilities Application submitted to the NEB and was done so in-line with the requirements of the TERMPOL Review Committee's processes; as such, no additional or alternate marine risk assessments are planned at this time. Trans Mountain remains committed to engaging and communicating with the residents and staff of the District of North Vancouver on all the elements of the Project and Application, including those related to marine risk.	Societal risk tolerance criteria exist for hazardous materials in other jurisdictions such as the UK and the Netherland and Canada's MIACC guidelines reference these societal risk tolerances. The District seeks to understand how the risk assessment compares to these societal risk tolerance criteria. Trans Mountain has provided information regarding seeking to "engage the residents of the District" and conducting a comprehensive risk assessment. However, they have not answered the question which was "whether Trans Mountain has considered or taken any steps to develop societal risk tolerance criteria to determine what level of risk would be acceptable to residents from the District of North Vancouver and other Metro Vancouver residents potentially impacted by an oil spill in the marine environment?" If the answer is no, please state this.	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required. In the absence of directly applicable guidelines defining "societal risk" Trans Mountain has not undertaken such an assessment of marine transportation for the Project. Marine transportation incidents are assessed for their environmental impact in accordance with the NEB's requirements (National Energy Board, 2014). Trans Mountain believes that the information provided in its Application is fully satisfactory for the Board to carry out a CEAA, 2012 environmental assessment for which the NEB is the Responsible Authority and for the Board to make its recommendation report to the Governor in Council (Report) after considering whether the Project is in the public interest. **References:** National Energy Board. 2014. National Energy Board Filing Manual. Calgary, AB.
2.01.6(b)(i)	In the event of a worst case spill in Burrard Inlet, please advise whether Trans Mountain has enough booms, equipment and personnel immediately available to fully prevent spilled material (e.g. oil) from reaching the shoreline, beaches and mudflats of North Vancouver and protect sensitive habitats? If so: What are the lengths and types of the booms required?	**References:** TERMPOL Review Committee. 2014. TERMPOL Review Process Report on the Trans Mountain Expansion Project. 57 pp. Transport Canada. 2013. A Review of Canada's Ship-Source Oil Spill Preparedness and Response Regime. 66 pp. Reference (i) discusses worst-case spills in a ship-source context. Spill modeling done within Burrard Inlet was based upon a credible worst-case spill at Westridge Marine Terminal, an Oil Handling Fracility. Trans Mountain conservatively modeled a large operational spill scenario based on a tanker loading operation incident that resulted in a 160 m3 oil spill at the dock complex. It is standard operating procedure that the receiving tanker be pre-boomed prior to commencement of the loading operation. As such, 128 m3 was contained within the boom and recovered. For modeling purposes it was assumed that 32 m3 escaped the primary containment.	This question was not answered fully. Please provide details (lengths and types) of booms that were utilized in the general scenario described in the request.	The simulation used 4,234 metres of sheltered/shoreline boom in addition to the containment boom that is normally deployed around the terminal. The 160 m^3 (worst case) simulated spill scenario, modelled as originating from Westridge Marine Terminal, was documented in Application Volume 8C, Technical Report TR 8C 12 Supplemental TR S13, Oil Spill Response Simulation Study, Sections 5 and 6 (Filing ID A3S5J4 and A3S5J5), and Figures 5.1 to 5.14 (Filing ID A3S5J5). The Technical Report (TR) does not discuss or state specific boom lengths used in the simulation to mitigate the spill volumes modelled as having escaped secondary containment booming surrounding the ship loading at the time of the simulated spill occurrence. The Introduction of the TR (Filing ID A3S5J0) states that "The resources for mitigation were based on existing and proposed equipment stored in warehouse and caches in accordance with the Future Oil Spill Response Approach Plan,

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		In the simulation, Western Canada Marine Response Corporation (WCMRC) arrives on-site within 1-hour of notification. Over the next 13-hours, WCMRC initiates the following strategies: • Collection booming at two locations west of the Westridge Marine Terminal • Protective booming at pre-identified sensitive locations in Burrard Inlet • Mobilization of eight skimming vessels • Mobilization of two large temporary storage barges • Mobilization of two 40-tonne mini-barges • Dispatch of vacuum trucks to support recovery and storage activities. Within 8-hours after the spill began, about 11 m3 of the hypothetical 32 m3 of oil that escaped the boom was recovered. Thereafter, passive sheen management with sorbent products was used as a viable but unquantifiable countermeasure for the response organization to employ. (i) The amount and type of boom required to respond will be dependent on location and areal extent of the spilled oil, atmospheric conditions and shoreline type(s) requiring protection. For the general scenario described in the request, general purpose and shore-seal types of boom may both be used depending on conditions encountered.		Tran Mountain Expansion Project, which has been prepared by WCMRC." Section 2 of the TR (Filing ID A3S5J0) indicates that the types of boom used to contain and thicken oil, and also to protect shorelines were sheltered-water and shoreline boom types respectively.
2.01.6(b)(iv)	How long will it take to get the booms in place?	The time to get all booms in place cannot be provided at this time as it will depend on some of the same factors stated in (i) above. Refer to response to City of North Vancouver IR No. 2.3.01e, which can be found below: "Response times are a function of the time needed to mobilize the resources, time to transport equipment from its location to the spill site, and time to deploy the equipment on site. Application Volume 8C, TERMPOL Reports, TR 8C-12 S12 – Review of Trans Mountain Expansion Project Future Oil Spill Response Approach Plan Recommendations on Bases and Equipment, Sections 2 and 3 (Filing ID A3S5I9) detail the comparison between the current response times and the future response times that have been proposed to support the Project. Historically, WCMRC's response time to incidents in the Vancouver Harbor have averaged 60.4 minutes. The proposed enhancements to WCMRC's capabilities in support of the Project will result in improved response times throughout the shipping route. With 24/7 staffing in the Vancouver Harbour base, Westridge response time is also expected to be	This question is not answered fully. The response time is 60 minutes to arrive – it will take considerably longer to deploy booms to protect the North Shore if the spill has escaped containment. The modelling and exercises would demonstrate this. In the simulation, Western Canada Marine Response Corporation (WCMRC) arrives on-site within 1-hour of notification. Over the next 13 hours, WCMRC initiates the following strategies: • Collection booming at two locations west of the Westridge Marine Terminal • Protective booming at pre-identified sensitive locations in Burrard Inlet • Mobilization of eight skimming vessels • Mobilization of two large temporary	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required. The requested information is dependent on factors such as location and areal extent of the spilled oil, atmospheric conditions and shoreline type(s) requiring protection. Trans Mountain does not have this information available and submits that it would be unreasonable to request that Trans Mountain provide this information at this time.

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		reduced over the current in-harbour average."	storage barges • Mobilization of two 40- tonne mini-barges • Dispatch of vacuum trucks to support recovery and storage activities. To answer the question asked, please provide details on the length of time to get the booms in place based on historical response times and learnings from field exercises. Within the 13-hour time frame in the simulation listed above, please provide details on the timing of boom installation for the protective booming at pre-dientified sensitive locations in Burrard Inlet.	
2.01.6(b)(v)	What are the types and the locations for the boom placements?	Types and locations of boom placements will be governed by WCMRC Geographic Response Plans and the experience of their response personnel. Please contact them directly to view these.	Not answered.	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required.
2.01.6(b)(vi)	What other spill mitigation techniques will be used specifically to ensure oil does not contaminate the shoreline and mudflats of the District of North Vancouver? Please also provide a copy of Geographic Response Plans currently in use by WCMRC for all areas encompassing District of North Vancouver's shoreline and exposed mudflats.	For information on what other spill mitigation techniques will be used specifically to ensure oil does not contaminate the shoreline and mudflats of the District of North Vancouver, refer to response to City of Port Moody IR No. 2.3.05a; the part relevant to the request is included below: "Because intertidal mudflats are difficult and possibly hazardous to walk upon, containment boom deployment would likely occur from a boat. Ideally deployment would target the high tide window to facilitate the best access to the shoreline. General-purpose boom would be used to provide protective and exclusionary booming that is compatible to the local shoreline features. Shore seal boom, constructed with an air-filled flotation chamber and a water-filled skirt, would also be deployed in areas where it was appropriate to seal the shore at the water's edge. In general, mudflat cleanup operations may include, but not be limited to: low pressure/low temperature flushing followed by mechanical and/or passive recovery with sorbent products and natural attenuation. In all cases, a Net Environmental Benefit Analysis (NEBA) will take place to ensure the recommended treatment will yield the best result with the least disruption to the environment." Trans Mountain's Westridge plans may not address all areas of the Burrard Inlet and Trans Mountain encourages communities, such as the District of North Vancouver, to participate with WCMRC on the development of oil spill emergency response plans including Geographic Response Strategies (GRS) and Geographic	This question was not answered fully. Please also provide a copy of Geographic Response Plans currently in use by WCMRC for all areas encompassing District of North Vancouver's shoreline and exposed mudflats.	Please see the response to District of North Vancouver IR No. 2.05.07a. For convenience, it can be found below: "*The response to this information request pertains to WCMRC for response, the certified Response Organization for the navigable waters of British Columbia and the Provincial /Federal Government agencies responsible for identification of sensitivities and net environmental benefit clean up techniques.* *In 2013, WCMRC initiated the development of a new coastal mapping system. This new system, still under development, will house not only coastal sensitivities and associated Geographic Response Strategies (GRS) but also all associated logistical support information.* *Shoreline sensitivities, as noted above, form part of WCMRC's mapping database. GRS is a plan used for the initial nearshore response in an emergency situation. The program utilizes local knowledge to assist in shoreline sensitivity classification to possible oiling. As for shoreline protection strategies, these are built, in conjunction and/or reviewed with local stakeholders (e.g., Emergency Planners/First Nations) to address the sensitivities that have been identified as part of the coastal mapping project. Each sensitivity has a corresponding geographic response strategy and protective assignment developed and ready to be implemented in the event of a spill. Each feature is then field-tested and a two-page reference document is developed and reviewed with government agencies. The goal of a GRS is to protect sensitive natural and cultural*

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		Response Plans (GRP) for the Burrard Inlet and, based upon the community's interest, other locations in the Salish Sea. Please also refer to Section 5.5.2, Table 5.5.3 of Volume 8A of the Application (Filing ID A3S4Y6) and Volume 8C, TERMPOL Reports, TR 8C-12 S12 – Review of Trans Mountain Expansion Project Future Oil Spill Response Approach Plan Recommendation on Bases and Equipment, Section 3 (Filing ID A3S4Z0) for more information about marine spill response enhancements.		*features while reducing decision-making time during an actual spill. GRSs are designed to provide all the necessary information required to carry out an efficient and rapid shoreline response. The District of North Vancouver is encouraged to contact WCMRC directly to view the products of their mapping application."* Western Canada Marine Response Corporation, with offices in Burnaby, BC, is best equipped to show and explain the outputs of their Coastal Mapping System to the District of North Vancouver.
2.01.6(d)	Please provide the spill model for a worst-case discharge spill in Burrard Inlet based on the Afromax – the maximum size of vessel that could load at Westridge Marine Terminal - utilizing local oceanographic and meteorological data.	Refer to response to District of North Vancouver IR No. 2.01.6a, which explains that the loss of a double hull tanker with its entire cargo is not considered a credible scenario. As such, no additional oil spill modeling is deemed necessary The definition of a credible worst case scenario is not provided in Termpol Review Process 2001 (Transport Canada 2001) and is left to the risk assessor to determine and then considered by the Termpol Review Committee. Det Norske Veritas (DNV), author of the Project's General Risk Analysis and Intended Methods of Reducing Risk (Filing ID A3S5F4) recommends that a credible worst case scenario should be defined as representing a scenario whose likelihood of occurrence is remote, which will, if the event were to occur, cause significant impact. Based on overall conditions of the route from Westridge Marine Terminal to Buoy "J", DNV defined a credible worst case sized spill as 16,500 m3 based upon the low probability 90th percentile-size loss of cargo oil resulting from a collision or grounding. Relative to the overall route however, the likelihood for a spill of this size occurring in the Burrard Inlet is very low and not probable due to the strong set of risk reducing measures in place, as well as the slow speed of tankers and other vessels in this area. These risk reducing measures are discussed in Section 6, Technical Report 12, Volume 8C, TERMPOL 3.15, General Risk Analysis listed and include (Filing IDs A3S5F6 and A3S5F8): • Using only modern Double hull tankers, which meet conditions of the Tanker Acceptance Standards; Speed limitations in the harbour; • Clear Narrows at Second Narrows and First Narrows with a harbour master's launch escorting to ensure this condition is met by other vessels; • Under direction of two BCCP pilots carrying independent GPS based navigation o computers (Personal Pilotage Units) who have been trained at	The explanation given demonstrates that Trans Mountain and/or KMC considered the factors related to the likelihood of occurrence and deemed them to be a very remote likelihood. The conclusion that it is not a credible scenario is based on a reliance that the risk reduction measures are in place. Accordingly, please advise what guarantees or controls are in place to ensure the risk reducing measures discussed in Section 6, Technical Report 12, Volume 8C, TERMPOL 3.15, General Risk Analysis listed and included (Filing IDs A3S5F6 and A3S5F8) are followed, maintained or improved for the life of the project.	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required. In accordance with Board Ruling No. 33 (Filing ID A63066), the request is for new information. Seeking more specific information or more details in the motion to compel full and adequate responses is essentially a request for new information and is not permitted under Ruling No. 33. Rather than seeking to compel a further answer, the Intervenor may file its own evidence in response or provide its views during final argument.

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		directing the movement of the tanker; o Travelling through known shipping fairways within the harbour; and o Tethered to multiple tugs • Developing a shipping channel in the Central Harbour for passing vessels in the Westridge area that will improve berth and anchorage safety. In response to a request from Port Metro Vancouver (PMV IR No. 1.8.1, Filing ID A3X3F4) DNV made a more detailed assessment of the collision risk in Segment 2 based on energy levels of the traffic in the area. In studies for the Dutch Department of Transport, DNV has established energy thresholds for breaking the cargo tank of a tank vessel. The energy to make a small hole is 9 MJ while the energy to make a large hole is 18.7 MJ, given that the collision is 90 degrees on the tanker vessel. DNV has conducted a detailed analysis of the traffic in Segment 2 and calculated the energy of all vessel transits in the segment over one year. The energy of the vessel in the transit has been calculated based on the vessel's deadweight tonnage and the speed restriction in Segment 2. The detailed analysis shows that 73% of the vessel transits in this area are so small that they will not cause any breakage of the cargo tank in case of a collision, while 2% of the vessel transits can cause a small hole in case of a collision 90 degrees on the tanker. The remaining 25% of vessel transits in Segment 2 are vessels that have the energy to exceed 18.7 MJ and make a large hole in the cargo tank. However, these vessels are over 51,000 DWT with an average length of approximate 200 meters. Given that such large vessels are under pilotage and must follow the rules of the harbor, they cannot approach a laden tanker moving through the harbour from the Westridge terminal to sea. The detailed analysis shows that the large majority of the collisions will not have the energy to break the cargo hull and that there are only chances for small hole sizes in case of breakage of a cargo tank. Thus, only potential smaller oil spills than the estimated credible worst case size spill will occur in the rare event of a collision. The detailed analysis also shows that the probability for a collision causing an oil spill is 1 in 19,286 years which is significantly less than the 1 in 2,664 estimate provided in Technical Report 12, Volume 8C, TERMPOL 3.15, General Risk Analysis (Filing ID A3S5F4). Thus DNV has not considered a credible worst case oil spill scenario in Segment 2 as realistic and relevant for the risk analysis study. DNV identified the credible worst case scenario for an oil spill during tanker loading as a representative credible worst case oil		

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		spill within Burrard Inlet. The credible worst case scenario during tanker loading was calculated as a spillage of 100 m3 oil occurring once every 234 years within the pre-boomed area surrounding the tanker at berth. Spill modeling was carried out using 160 m3 spilled to the waters of Burrard Inlet (a more conservative size oil spill than the credible worst case) and having 32 m3 escape the containment boom. Trans Mountain believes that appropriate and credible information on oil spill modeling has been included with the Application. The information included enables the appropriate level of risk assessment to have been conducted and risk-informed decision making in accordance with the National Energy Board's letter, *Filing Requirements Related to the Potential Environmental and Socio- Economic Effects of Increase Marine Shipping Activities, Trans Mountain Expansion Project* (NEB 2013, Filing ID A3K9I2). No additional modeling or assessment is contemplated. **References:** National Energy Board. 2013. Filing Requirements Related to the Potential Environmental and Socio-Economic Effects of Increase Marine Shipping Activities, Trans Mountain Expansion Project. Calgary, AB. 3 pp. Transport Canada. 2001. Termpol Review Process 2001. Ottawa, ON. 120 pp.		
2.02.2(a)(ii)	What is a time estimate for the availability of outputs from the computer simulation models?	KMC does not have plans at this time to use computer-generated real-time air dispersion modeling for emergency response in the case of a spill at Westridge Marine Terminal. With its Air Monitoring Plan (AMP) as a template and general guideline, KMC will develop plans specific to the conditions of the actual event. The volume of product, product characteristics, weather conditions and potential receptors will be considered in determining appropriate sampling locations and frequencies required to prevent public exposure in the areas surrounding Westridge Marine Terminal. These factors influence the development of these plans that can change and evolve during the course of an incident. The air quality criteria used to establish threshold values that would trigger public notification in the event of an unplanned release are the United States (US) Environmental Protection Agency (EPA) Acute Exposure Guideline Levels (AEGLs). These thresholds are specific to acute toxicology data that would be representative of an emergency event, rather than occupational health and safety thresholds based on chronic exposure.	The District appreciates the description of how the plans will be developed but the question on the time estimate for the availability of information that can be used to inform emergency planning is not answered. What is the time estimate for the development of plans that will be developed as identified in the response?	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required. In accordance with Board Ruling No. 33 (Filing ID A63066), the request is for new information. Seeking more specific information or more details in the motion to compel full and adequate responses is essentially a request for new information and is not permitted under Ruling No. 33. Rather than seeking to compel a further answer, the Intervenor may file its own evidence in response or provide its views during final argument.
2.04.1(b)	Reference (iii) provides a list of mutual aid partners and contractors who are in KMC's network. Please provide, evidence of their	Kinder Morgan Canada (KMC) maintains Master Service Agreements (MSA) with many contractors including those that provide Emergency Response services. Many of the companies for	Partially answered. The response time for each contractor is not given as requested. Please also elaborate on the "rare exceptions"	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no

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	agreement to support in an incident response and the specifics and limitations regarding their capacity and response times in supporting the response to an emergency event (for example, many contractors utilize off- duty firefighters who may be called back to their fire departments during large emergencies).	which MSAs have been negotiated offer immediate Emergency Response services, 24 hours per day. Retainer agreements to guarantee contractor availability for emergency response have in many cases proven unnecessary. That said KMC does have retainer arrangements with a number of service providers. The names cannot be included in this response as contract information is commercially sensitive and is proprietary. Emergency response requests have received priority status from contractors and the contractor resources have typically initiated an expedited response with rare exceptions. KMC anticipates and expects that this will continue. A sampling of the contractors that provide emergency response services, with which KMC has MSAs in place include Quantum Murray, Golder Associates, McRae's Environmental and Fire Master Oilfield Services. The contractual agreements with West Coast Marine Response (WCMRC) and Western Canada Spill Services (WCSS) are slightly different from other emergency response services and equipment providers: Kinder Morgan Canada has an emergency response agreement in place with West Coast Marine Response Corporation (WCMRC) specifically for marine spills originating at Westridge Marine Terminal in Burnaby, BC. The agreement guarantees the response of WCMRC for marine spills at Westridge for durations of up to 24 hours, with specific stipulated response times. If the requirement for WCMRC response extends beyond 24 hours the agreement includes provision for extension KMC is a member company with Western Canada Spill Services, a spill response cooperative which maintains spill response equipment accessible to all its member companies in a number of locations across Alberta and in northeast BC. Also refer to response to Province of BC IR No. 2.24c (copied below for completeness sake): "Kinder Morgan Canada Inc. (KMC) takes its responsibility to respond to pipeline incidents very seriously. During the response to an emergency incident on its system, KMC will use its own trained personnel and if required, response contractors and equipment and/or assistance from one or more of its mutual aid partners. KMC belongs to a number of response organizations and participates in mutual aid exercises to supplement the company's self-reliant response capability. KMC has contracts and master services agreements with a number of response contractors to supply equipment and/or personnel during an emergency, some of whom are identified in Section 4.5.2 of Volume 7 (Filing ID	as this is relevant to our request. Limitations to their capacity or what could limit their responses is not addressed.	further response is required. In accordance with Board Ruling No. 33 (Filing ID A63066), the request is for new information. Seeking more specific information or more details in the motion to compel full and adequate responses is essentially a request for new information and is not permitted under Ruling No. 33. Rather than seeking to compel a further answer, the Intervenor may file its own evidence in response or provide its views during final argument.

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		A3S4V5), many others are identified in the KMC Emergency Response Plans. Mutual aid agreements are in place if needed. The qualification that contractor and equipment availability is ensured "to the maximum extent practicable" means that KMC's expectation is that contractor services and equipment are available unless very unusual circumstances arise such as, but not limited to: • severe weather on some or all of the mobilization route creates unsafe conditions to mobilize utilizing vehicles, vessels or aircraft, the mode of transportation depending on the requirements of the emergency, • a combination of road closures and poor visibility make it unsafe to • transit to the incident with a combination of vehicles and aircraft, • a major emergency incident occurs elsewhere in a particular contractor's area of operations that impairs their ability to respond. KMC maintains commercial relationships with a number of service providers of pipeline incident response services to provide diversity and to maximize the likelihood of all required resources being available to respond when and where needed. KMC's Emergency Response Plans contain listings of the various contractors and service providers operating in the geographic districts transited by the pipeline. KMC has not disclosed the names of contractors or service providers for privacy reasons."		
2.04.4(a)	Please provide details on the projected volumes of contaminated liquid, contaminated debris, contaminated sediment and clean up materials that would be generated in a credible spill scenario as defined by Trans Mountains application and a worse case marine spill scenario as defined in the Expert Panel Tanker Safety Report at Westridge Terminal or marine vessel casualty in Burrard Inlet.	Although the information requested is not within the scope of this proceeding and not relevant to the National Energy Board's (NEB) List of Issues, Trans Mountain Pipeline ULC (Trans Mountain) offers the following response to your question: The Intervenor's question cannot be answered in the manner asked. Waste generation is a function of the size of the affected area, the degree of oiling, shoreline matrix and recommended treatment options. This information is situation-specific and, as such, Trans Mountain cannot provide the requested information. This would be addressed as part of a waste plan developed by the Environment Unit of the Planning Section within the ICS structure. With regard to planning for on-water liquid storage (both primary and secondary), calculations were performed according to federal standards. The results can be found in Section 12.1.2 and Appendix C TR 8C-12 S12 Volume 8C Review of Trans Mountain Expansion Project Future Oil Spill Response Approach Plan Recommendations on Bases and Equipment Temporary Storage	Waste collection, transport, storage and treatment will likely be in the District. TMP will likely request a staging area in and through Cates Park (they have done this in the past without notice to the District - eg. training exercises involving Cates Park). This would involve using the park and boat ramp for removal of oil contaminated equipment and transport to Newalta in Maplewood. The shortest route would be through Cates park. Do the plans include District property, i.e. Cates Park? This question is within the scope of the NEB issues for emergency planning – Issue #11. Please provide details on any anticipated use of District property such as Cates Park in the handling of contaminated liquid, contaminated debris, contaminated sediment and clean up	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required. In accordance with Board Ruling No. 33 (Filing ID A63066), the request is for new information. Seeking more specific information or more details in the motion to compel full and adequate responses is essentially a request for new information and is not permitted under Ruling No. 33. Rather than seeking to compel a further answer, the Intervenor may file its own evidence in response or provide its views during final argument.

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		(Filing ID A3S5I9).	materials that would be generated in a credible spill scenario as defined by Trans Mountains application	
2.04.4(d)	Please provide a copy of the Waste Management Plan that was prepared by or on behalf of Trans Mountain as part of the 2007 spill event and any lessons learned.	Kinder Morgan Canada Inc. (KMC) acknowledges the interest of The District of North Vancouver to seek more information about the existing emergency management program (EMP) documents, and reference materials related to the Trans Mountain Pipeline System, which is why KMC filed a redacted copy of the existing Emergency Response Plans publicly. In Ruling No. 50 (Filing ID A4G519) the National Energy Board (NEB) determined that it was "satisfied that sufficient information has been filed from the existing EMP documents to meet the Board's requirements at this stage in the process." The Waste Management Plan referenced was developed and approved by Unified Command to adequately address the waste requirements of the situation-specific incident. Plans are developed to meet regulatory requirements in consultation with provincial authorities. There were no specific lessons learned identified with respect to waste management. Kinder Morgan Canada will continue to exercise the development of these plans based on outlined ICS responsibilities.	Not answered. Please provide a copy of the Waste Management Plan that was prepared by or on behalf of Trans Mountain as part of the 2007 spill event. This is relevant to understanding the waste management plan from an emergency planning perspective.	In accordance with Board Ruling No. 31 and Ruling No. 50 (Filing IDs A63036 and A65390), the response was full and adequate. Trans Mountain has provided sufficient information to meet the Board's requirements at this stage in the process and no further response to the IR is required.
2.04.4(e)	Please provide details on the capacity of waste storage and/or disposal sites that would be available for use by Trans Mountain or the generator of the waste.	In addition to storage equipment maintained at existing facilities, KMC has contractual relationships with service providers able to promptly supply additional equipment or facilitate off-site waste disposal during any type of emergency for all potential waste streams. KMC has not disclosed the names of contractors or service providers for privacy reasons.	This question is not answered. Please provide details on the capacity of waste storage and/or disposal sites that would be available for use by Trans Mountain or the generator of the waste.	In accordance with Board Ruling No. 31 and Ruling No. 50 (Filing IDs A63036 and A65390), the response was full and adequate. Trans Mountain has provided sufficient information to meet the Board's requirements at this stage in the process and no further response to the IR is required.
2.04.4(f)	Are there existing agreements in place for waste storage and/or disposal sites to handle the projected volumes of contaminated liquid, contaminated debris, contaminated sediment and clean up materials that would be generated up to and including the worst case marine spill scenario at Westridge Terminal or marine vessel casualty in Burrard Inlet?	Although the information requested is not within the scope of this proceeding and not relevant to the NEB's List of Issues, KMC offers the following response to your question: KMC has contractual relationships with service providers able to promptly provide disposal options for all potential waste streams during a release situation along the Trans Mountain Pipeline. KMC has not disclosed the names of contractors or service providers for privacy reasons.	See comment re. DNV IR No. 2.04.4(e).	In accordance with Board Ruling No. 31 and Ruling No. 50 (Filing IDs A63036 and A65390), the response was full and adequate. Trans Mountain has provided sufficient information to meet the Board's requirements at this stage in the process and no further response to the IR is required.
2.04.4(g)	Please provide copies of any Waste Management Plans or information related to them that have been developed as part of spill training exercises for the Westridge Marine Terminal.	Although the information requested is not within the scope of this proceeding and not relevant to the NEB's List of Issues, KMC offers the following response to your question: Documentation referred to in the Emergency Response Plans such as waste management plans are situation specific documents that are produced at the time of an incident as part of the overall Incident Action Plan. The content and format of these specific action plans is largely driven by the Incident Command System	See comment re. DNV IR No. 2.04.4(e).	In accordance with Board Ruling No. 31 and Ruling No. 50 (Filing IDs A63036 and A65390), the response was full and adequate. Trans Mountain has provided sufficient information to meet the Board's requirements at this stage in the process and no further response to the IR is required.

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		(ICS) process. A rigorous training and response exercise program is in place for all operations and head office staff that ranges from detailed equipment deployment drills to full ICS management and organization training and deployment. The Waste Management Plan is exercised as part of this program		
2.04.4(h)	Please elaborate on the role for the Newalta Corporation in the collection, handling, transport, storage and disposal of oily waste in the event of a spill in Burrard Inlet.	Although the information requested is not within the scope of this proceeding and not relevant to the NEB's List of Issues, KMC offers the following response to your question: Newalta Corporation specializes in the collection, handling, transport, storage and disposal of various waste streams and is capable of providing support that meets regulatory requirements in the event of a release situation.	See comment re. DNV IR No. 2.04.4(e).	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required.
2.05.2(a)	Please describe in detail the oil recovery techniques and associated equipment which will be used to recover submerged or sunken oil in a marine environment in the event of a spill in Burrard Inlet. If numerous techniques can be used, please describe the conditions in which each technique will be used and its effectiveness.	Any oil spill in Burrard Inlet as a result of the project is a low likelihood event. The diluted bitumen carried on the Trans Mountain system will not immediately or uniformly sink if released to the marine environment. …the Gainford report (in the Application, Volume 8C, TR 8C-12 S7 – A Study of Fate and Behavior of Diluted Bitumen Oils on Marine Waters) (Filing ID A3S5G2) showed that fresh and weathered representative samples of diluted bitumen (CLB and AWB) would float on freshwater for eight days or more depending on local factors such as sediment and mixing energy. The salinity of Burrard Inlet water has a greater density than freshwater. The same tests showed that conventional skimming equipment is capable of removing both fresh and weathered oil.	Not answered – TMP cites the out-dated Gainford study to imply dilbit would not sink for up to 8 days and goes on in the answer to explain this from that study. The "Federal Government Technical Report: Properties, Composition, and Marine Spill Behaviour, Fate and Transport of Two diluted Bitumen Products from the Canadian Oil Sands". Nov. 30, 2013 shows dilbit will start to sink in 2 hrs with wave action and form tar balls and that the behavior and fate of dilbit is not well understood. TMP cannot rely on the Gainford report and not have a plan for submerged oil recovery. An expert Royal Commission was struck several weeks ago to review this issue.	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required.
2.05.2(b)	Does Trans Mountain have the oil recovery equipment described in the answer to (a) above on hand at this time? If so, where is it stored and what spill capacity can it handle? If not, please provide details on commitments that Trans Mountain will undertake to address the requirement for oil recovery equipment as described in (a) above.	The information requested has been addressed in the response to District of North Vancouver IR No. 2.05.02a	Not answered – see DNV IR #2.0.5.2(a) above.	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required.
2.05.2(c)	If not, how will it be procured in the event of a spill and how long would it take to arrive at the spill location?	The information requested has been addressed in the response to District of North Vancouver IR No. 2.05.02a. Section 5.5.2, Table 5.5.3 of Volume 8A of the Application (Filing ID A3S4Y6) contains a summary comparison of existing and proposed planning standards for marine spill response including response times.	Not answered – see DNV IR #2.0.5.2(a) above.	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required.

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2.05.5(b)	Will Trans Mountain maintain an adaptive review process that regularly tests (via independent testing led by regulatory agencies) the spill response plans at a mandated interval and shares information with all stakeholders to ensure recommendations are reviewed and put in place to maintain spill response capabilities over the Project lifespan? Please provide details on the commitment proposed by Trans Mountain to address this consideration.	Refer to responses to District of North Vancouver IR No. 2.05.05a and District of North Vancouver IR No. 2.01.1b.	Not answered - Trans Mountain has provided information regarding the legal requirements for lifecycle regulation of all aspects of the Project operation. The question was whether Trans Mountain will maintain an adaptive review process with testing at mandated intervals and information shared with stakeholders. This question has not been answered. If there is no mandated interval for testing, please state this.	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required. Please see the response to District of North Vancouver IR No. 2.05.05a below: *"KMC has established and implemented an Integrated Safety and Loss Management System (ISLMS) as the basis for ensuring a strong safety culture with an emphasis on continuous improvement. The ISLMS outlines KMC's commitment to establishing, implementing and monitoring and continuously improving processes and controls to ensure that it is conducting business in a safe, environmentally responsible and sustainable manner. The Emergency Management Program is governed by the ISLMS. The ISLMS is designed to meet the requirements of the National Energy Board (NEB) Onshore Pipeline Regulations, and is described in further detail in the Application, Volume 7, Section 4.2 (Filing ID A3S4V5). The NEB provides regulatory oversight of Trans Mountain's operations and may audit Trans Mountain's emergency management program at any time.* *Ultimately, KMC's emergency management program must continue to meet the requirements of the National Energy Board Onshore Pipelines Regulations (2013) (OPR). As it does for the existing system, the OPR provides lifecycle regulation for all aspects of the Project operation including requirements for emergency response programs. KMC must maintain and update the EMP throughout the lifecycle of the expanded Trans Mountain Pipeline System. As well, throughout the life of the expanded system, NEB staff will continue to conduct emergency response exercise evaluations and emergency procedures manual reviews to verify that companies are prepared to anticipate, prevent, manage, and mitigate emergency situations."* Please see the response to District of North Vancouver IR No. 2.01.1b below: *"Trans Mountain Pipeline ULC (Trans Mountain) gathered feedback and concerns from the beginning of the Project. Emergency planning and response have been key areas of concern in both pipeline and marine communities since engagement for the Project began in May 2012. To address this concern, Trans Mountain initiated the first two phases of a series of Emergency Management Stakeholder Workshops for emergency planners and first responders beginning in September 2013 and continuing through 2014. Summaries of engagement findings can be found in Table 1.7.3 of Volume 3A (Filing ID*

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				A3S0R5), Section 1.5.2 of Consultation Update No. 1 & Errata (Filing ID A3Y1G4), Section 1.5.1 of Consultation Update No. 2 (Filing ID A3Z8J2) and Section 1.7 of Consultation Update No. 3 – Part 1, Public Consultation was filed with the National Energy Board (NEB) on February 3, 2015. Refer to NEB IR No. 3.005a Attachment 1 (Filing IDs A4H1W2 and A4H1W3). *The District of North Vancouver has been included in Trans Mountain's engagement efforts for emergency response to date. Our records (District of North Vancouver IR No. 2.01.1b-Attachment 1) indicate a representative of the District of North Vancouver attended a four-hour workshop held with the Metro Vancouver Regional Emergency Planning Committee (REPC) on December 6, 2013 at E-comm Emergency Communications building in Vancouver, BC whereby an overview of current Trans Mountain Pipeline (TMPL) operations, the Community Awareness and Emergency Response (CAER) program and an overview of the proposed plans for expansion and a discussion of next steps for engagement were presented. Refer to District of North Vancouver IR No. 2.01.1b-Attachment 2 for a copy of the PowerPoint presented on December 6, 2013. Refer to District of North Vancouver IR No. 2.01.1b-Attachment 3 for the summary of the TMPL Emergency Response Plan (ERP) that was distributed at this and other similar regional workshops held along the pipeline corridor. Full un-redacted copies of the current TMPL ERP and supporting documents were also made available for viewing at these workshops.* *The Application, Volume 7, Section 4.8 outlines the process to enhance Kinder Morgan Canada Inc.'s (KMC) existing emergency management programs (EMP) as they relate to the Trans Mountain Pipeline system (TMPL system) to address the needs of the Project (Filing ID A3S4V5). The final programs will be developed in a manner consistent with the National Energy Board's (NEB or Board) draft conditions related to emergency response (Filing ID A3V8Z8).* *KMC acknowledges the District of North Vancouver has interests and concerns about consultation opportunities for the updated EMP for the Project.* *Since the updated EMP depends upon the final detailed design of the Project, a process which will not be carried out unless the Project receives approval and until KMC has an opportunity to review the conditions of such approval, the updated EMP cannot be provided during the NEB's regulatory review of the Project. However, to ensure affected parties have the opportunity to express concerns and provide input which will inform the updated EMP, KMC will conduct a consultation program as part*

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				of developing the updated EMP as described in the NEB draft conditions related to emergency management. *Following receipt of a Certificate of Public Convenience and Necessity (CPCN) for the Project, KMC will file with the NEB a consultation plan related to KMC's EMP review that will include consultation scope, objectives; preliminary lists of regulatory authorities, communities, Aboriginal groups with whom KMC will engage, and a preliminary list of consultation locations and timing, as well as any other information that the NEB requires. The consultation plan will describe the methods that will be used to track commitments made during consultation and to incorporate them into KMC's EMP, including its ERP's. As part of this program KMC will periodically file reports with the NEB on progress of its EMP review including summaries of interested parties consulted and how their comments were considered.* *KMC will file with the NEB the revised ERP for the pipeline as part of the approval conditions for the Project. The plan will demonstrate KMC's ability to prepare for, respond to, recover from, and mitigate the potential effects of emergencies of any type related to the TMPL system. Filing of the ERP will include, for the NEB's consideration, a final report on the consultation process as well as confirmation that an independent third party has reviewed and assessed the ERP and that KMC has considered and incorporated the comments generated by the independent review and assessment into the plan.* *Ultimately, updates to the EMP incorporating feedback from consultation activities must result in an EMP that continues to meet the requirements of the National Energy Board Onshore Pipelines Regulations (2013) (NEB OPR). As it does for the existing system, the OPR provides lifecycle regulation for all aspects of the Project operation including requirements for ERP's. KMC must maintain and update the EMP throughout the lifecycle of the expanded TMPL system. As well, throughout the life of the expanded system, NEB staff will continue to conduct emergency response exercise evaluations and emergency procedures manual reviews to verify that companies are prepared to anticipate, prevent, manage, and mitigate emergency situations.* *KMC acknowledges the District of North Vancouver's interests and concerns about consultation opportunities for the updated EMP for the Trans Mountain Expansion Project (the Project) and will invite the District of North Vancouver to participate in the process described above."*

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2.05.7(d)	Please provide details of the District's shoreline exposure in the event of an oil spill taking into account the real extent of beaches, mudflats and estuaries at different tide heights, specifically including low tide. Please provide details on a map that shows all exposed shoreline types with their associated substrate type for the full area that could be exposed in the tidal range.	Refer to responses to District of North Vancouver IR Nos. 2.05.07a and 2.05.07b. The District of North Vancouver is encouraged to contact WCMRC directly to view the products of their mapping application and the Province to review their data.	Not answered – please provide the requested map, if it exists.	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required. Please see the response to District of North Vancouver IR No. 2.05.07a below: *"The response to this information request pertains to WCMRC for response, the certified Response Organization for the navigable waters of British Columbia and the provincial/federal government agencies responsible for identification of sensitivities and net environmental benefit clean up techniques.* *In 2013, WCMRC initiated the development of a new coastal mapping system. This new system, still under development, will house not only coastal sensitivities and associated Geographic Response Strategies (GRS) but also all associated logistical support information.* *Shoreline sensitivities, as noted above, form part of WCMRC's mapping database. GRS is a plan used for the initial nearshore response in an emergency situation. The program utilizes local knowledge to assist in shoreline sensitivity classification to possible oiling. As for shoreline protection strategies, these are built, in conjunction and/or reviewed with local stakeholders (e.g., Emergency Planners/First Nations) to address the sensitivities that have been identified as part of the coastal mapping project. Each sensitivity has a corresponding geographic response strategy and protective assignment developed and ready to be implemented in the event of a spill. Each feature is then field-tested and a two-page reference document is developed and reviewed with government agencies. The goal of a GRS is to protect sensitive natural and cultural features while reducing decision-making time during an actual spill. GRSs are designed to provide all the necessary information required to carry out an efficient and rapid shoreline response. The District of North Vancouver is encouraged to contact WCMRC directly to view the products of their mapping application."* Please see the response to District of North Vancouver IR No.2.05.07b below: *"The shoreline map in Ref. (i) s.7.5 is a general and illustrative reference tool meant to aid expedient decision regarding response measures during an ICS managed response. Please note that it is a map describing locations of shoreline types, and included in these shoreline types is the category "mud flats". This map would be but one of the many resources available in*

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				the event of a response, including CHS marine charts, aerial photography, helicopter reconnaissance, and familiarity of the responders to the local area. *Going forward the reference (i) shoreline map will be augmented by a detailed pre-spill SCAT study of the central harbour recently completed for Trans Mountain and WCRMC. Results of the study will be incorporated into Trans Mountain's Emergency Management Program. WCMRC is currently implementing a new technology based mapping system that capable of overlaying the pre-SCAT data and points of local knowledge supplied by First Nations and local governments and communities.* *WCMRC, the certified Response Organization for the navigable waters of British Columbia, in conjunction with the Unified Command, would be responsible for shoreline protection strategies as discussed in the response to District of North Vancouver IR No. 2.05.07a. The District of North Vancouver is encouraged to contact WCMRC directly to view the products of their mapping application"*
2.06.1(a)	Please provide details on how Cates Park, park users and marine tourists/residents would be impacted in the event of worst case spill event in Burrard Inlet. Please provide considerations for swimmers, boaters, public that attend events in the park, trail users and general public use considerations.	Trans Mountain evaluated potential socio-economic effects of credible worst-case and smaller spills from the Westridge Marine Terminal and Project- associated tankers. The results of the assessment are applicable to recreational sites or conservation areas such as Cates Park or the Conservation Area at Maplewood Flats. The rationale for this approach is provided below to respond to District of North Vancouver's request and other similar Information Requests regarding potential socio-economic effects of credible worst-case and smaller spills. A summary of potential effects relevant to Burrard Inlet is also provided. A description of the risk-based approach used to evaluate the potential effects of pipeline and Westridge Marine Terminal spills is provided in the introductory comments included in Section 6.0 of Volume 7 (Filing ID A3S4V6). A similar discussion for tanker oil spills is provided in the introductory comments included in Section 5.6 of Volume 8A (Filing ID A3S5Q3). The evaluation provided by Trans Mountain to evaluate the consequences of credible worst-case spills was patterned on the structured risk assessment approach developed to support the Aleutian Islands Risk Assessment (Transportation Research Board 2008) and included three key elements: • The first element involved a quantitative risk assessment to define the risk of spills from pipelines, the Westridge Marine Terminal, and Project-related marine vessels, the size of spills that could credibly occur, and credible locations for those incidents.	More detailed information is required. The District asked for details on how Cates Park, park users and marine tourists/residents would be impacted in the event of worst case spill event in Burrard Inlet. Trans Mountain answered that "a marine spill could result in adverse effects on recreational activities, including boating and beach use. Specific predictions about such effects were not provided because of the complexity associated with predicting hypothetical events". Spill response and emergency planning are all about "hypothetical events" and this does not prevent modelling from being done. The District needs do know the potential impacts an oil spill in Burrard Inlet may have on its foreshore, beaches and parks and the Project proponent should provide this information. It is not sufficient to say that "no widely accepted method exists for predicting oil spill socio-economic effects due to the inherent complexity resulting from the role of human interpretation and its influence on individuals' experiences of social effects and their ability, willingness and confidence to respond to change." Trans Mountain has stated that "the risk-based	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required.

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		• The second element involved a qualitative assessment of potential environmental and socio-economic consequences based on evidence from past oil spills and studies. This discussion considered a wide range of spill volumes. Where possible, the information provided in this section reflected issues identified during public consultation. • The third element involved more detailed quantitative analysis of environmental and human physical health outcomes. These analyses were based on credible worst-case and smaller spill scenarios developed for representative locations along the pipeline corridor and tanker transit route and at the Westridge Marine Terminal. Quantitative evaluations relied on the well-established and widely accepted Ecological Risk Assessment (ERA) and Human Health Risk Assessment (HHRA) methods to evaluate the ecological and physical human health outcomes for the hypothetical spill scenarios. A more quantitative approach was not adopted for predicting effects on other socio-economic indicators, including local and regional economies, recreational use, and community well-being (including Aboriginal health, culture, spiritual and traditional activities). This was because no widely accepted method exists for predicting oil spill socio-economic effects due to the inherent complexity resulting from the role of human interpretation and its influence on individuals' experiences of social effects and their ability, willingness and confidence to respond to change. Section 5.6.1 of Volume 8A (Filing ID A3S5Q3) states that a marine spill could result in adverse effects on recreational activities, including boating and beach use. Specific predictions about such effects were not provided because of the complexity associated with predicting hypothetical events. Although oil spill risk of the Project was shown to be low, evidence from past spills indicates that if a large oil spill were to affect recreational areas, use of these areas would likely be disrupted, either voluntarily or by regulation, for at least one season. Results of the Ecological Risk Assessment of Westridge Marine Terminal Spills Technical Report (TR-7 of Volume 7) and Detailed Quantitative Ecological Risk Assessment (DQERA) completed for Westridge Marine Terminal and marine transportation and spill scenarios provide additional clarification about potential for shoreline effects in Burrard Inlet. The DQERA Westridge Marine Terminal loading scenarios are most relevant to the areas mentioned by the District of North Vancouver in Information Requests. As outlined in the Executive Summary of this report (response to NEB IR No. 1.62d – Attachment 1 Detailed Quantitative Ecological Risk Assessment for Loading Accidents and Marine Spills [Stantec Consulting Ltd 2014]; Filing ID A3W9K1), and described in more detail in	information provided by Trans Mountain provides information about the effects that could result from a large oil spill in Burrard Inlet without a specific assessment of the effects of an oil spill on the areas identified by the District of North Vancouver." The residents of the District of North Vancouver have the right to know what the impacts of an oil spill in Burrard Inlet may have on their foreshore, beaches and parks. Trans Mountain indicates that the new mapping system being developed by the WCMRC will address this and the District asks that Trans Mountain be required by the NEB to provide the new mapping information to interested local governments as soon as it is available.that could result from a large oil spill in Burrard Inlet without a specific assessment of the effects of an oil spill on the areas identified by the District of North Vancouver." The residents of the District of North Vancouver have the right to know what the impacts of an oil spill in Burrard Inlet may have on their foreshore, beaches and parks. Trans Mountain indicates that the new mapping system being developed by the WCMRC will address this and the District asks that Trans Mountain be required by the NEB to provide the new mapping information to interested local governments as soon as it is available.	

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		Section 4.4.5 (Filing ID A3W9K3), shoreline oiling could occur in the areas mentioned by District of North Vancouver. The DQERA also concludes that shorelines contacted by oil or affected by subsequent clean-up activities would recover within two to five years. Stochastic modelling was used to predict the probability that specific areas within Burrard Inlet would be oiled during winter, spring, summer and fall summery seasons. Maps included in Appendix D of the Westridge ERA (Filing ID A3S4X1) based on this modelling show that the probability that Cates Park would be oiled is less than 50% in all seasons, while probability that the Conservation Area at Maplewood Flats would be oiled is greater than 50% during summer, but less than 50% in all other seasons. This description shows that the risk-based information provided by Trans Mountain provides information about the effects that could result from a large oil spill in Burrard Inlet without a specific assessment of the effects of an oil spill on the areas identified by the District of North Vancouver. The assessment provided in the Application demonstrates that, although the probability of a credible worst-case crude oil spill affecting recreational and conservation areas in Burrard Inlet is low, substantial negative effects can occur if prompt and effective measures are not taken to mitigate the immediate impacts by containment and recovery. In the unlikely event of an incident such as a release into the Burrard Inlet, Trans Mountain is responsible for loss and damage resulting from the release. Given the many variables and uncertainties surrounding any particular incident, there is no credible way of defining the specific mitigation measures that would be implemented, but government authorities and Aboriginal groups who are impacted by the incident would be invited to participate in Unified Command established as part of the internationally recognised, Incident Command System (ICS) for emergency response. This allows government authorities, Aboriginal groups, and scientific advisors to put forth their objectives and priorities along with other members of Unified Command. Local municipalities are not responsible for spill clean-up; however, it is appropriate that they are directly involved in emergency response decision-making through Unified Command and to receive real time updates throughout the course of the emergency. Participation in Unified Command would allow District of North Vancouver or others to identify specific measures to mitigate impact to their communities including effects on Cates Park and the Conservation Area at Maplewood Flats. **Reference:** Transportation Research Board. 2008. Risk of vessel accidents and spills in the Aleutian Islands, Designing a comprehensive risk		

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		assessment. Prepared for the Transportation Research Board of the National Academies by the Committee on the Risk of Vessel Accidents and Spills in the Aleutian Islands: A study to design a comprehensive risk assessment Risk Assessment. Transportation Research Board Special Report 293.		
2.06.1(b)	Is there a plan in place to address and mitigate the impacts of a marine spill on Cates Park users? If so, what is it?	The response to District of North Vancouver IR No. 2.05.07a is repeated here because it details a response plan for the subject area through the GRS process. "In 2013, WCMRC initiated the development of a new coastal mapping system. This new system, still under development, will house not only coastal sensitivities and associated Geographic Response Strategies (GRS) but also all associated logistical support information. Shoreline sensitivities, as noted above, form part of WCMRC's mapping database. GRS is a plan used for the initial nearshore response in an emergency situation. The program utilizes local knowledge to assist in shoreline sensitivity classification to possible oiling. As for shoreline protection strategies, these are built, in conjunction and/or reviewed with local stakeholders (e.g., Emergency Planners/First Nations) to address the sensitivities that have been identified as part of the coastal mapping project. Each sensitivity has a corresponding geographic response strategy and protective assignment developed and ready to be implemented in the event of a spill. Each feature is then field-tested and a two-page reference document is developed and reviewed with government agencies. The goal of a GRS is to protect sensitive natural and cultural features while reducing decision-making time during an actual spill. GRSs are designed to provide all the necessary information required to carry out an efficient and rapid shoreline response. The District of North Vancouver is encouraged to contact WCMRC directly to view the products of their mapping application."	See comment re. DNV IR No. 2.06.1(a).	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required.
2.06.1(c)	Please advise for what length of time that the Cates Park could be impacted in achieving full recovery from various spill sizes, up to and including a worst case spill event. Please provide considerations for swimmers, boaters, public that attend events in the park, trail users and general public use considerations.	Refer to response to District of North Vancouver IR No. 2.06.1a.	See comment re. DNV IR No. 2.06.1(a).	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required.
2.06.1(d)	Please provide any specific considerations or mitigation measures proposed for the dock and boat ramp at Cates Park/Whey- ah-Wichen.	Refer to response to District of North Vancouver IR No. 2.06.1a.	See comment re. DNV IR No. 2.06.1(a).	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required.
2.09.2(a)	Please provide details on the existing data for wildlife in the vicinity of the Westridge Marine Terminal, including seasonal	Shore-based surveys undertaken in October 2012 and January, April and July 2013 identified 23 species of marine birds in the vicinity of the Westridge Marine Terminal. The most numerous	Not fully answered. Trans Mountain provided some helpful information regarding the different species of marine birds, but did not	Category: 3 In accordance with Board Ruling No. 33 (Filing ID A63066),

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	distribution patterns, estimated maximum numbers and species at risk.	species was Glaucous-winged Gull (66 individuals), followed by Herring Gull (60 individuals), Mew Gull (17 individuals) and Double- crested Cormorant (11 individuals). Long-term data sets compiled to characterize marine bird distribution and abundance in Burrard Inlet indicate a total of 121 waterbird species (813,647 individuals) recorded between 1962 and 2012. Of these species, eight are protected under the *Species at Risk Act*; four are listed as Threatened and four are listed as Special Concern. For detailed results of the marine bird surveys undertaken at the Westridge Marine Terminal, as well as a comprehensive review of existing data for marine birds in Burrard Inlet, please refer to the Marine Birds – Westridge Marine Terminal Technical Report (Volume 5C, Technical Report 5C-14, Stantec Consulting Ltd. December 2013, Filing ID A3S2R8). Marine mammal diversity and abundance in Burrard Inlet is generally considered low. The most abundant and commonly observed species is the harbour seal, which is resident within the Inlet and throughout the coastal waters of BC. While the number of harbour seals inhabiting Burrard Inlet is not known, the population in BC was estimated in 2008 to be 105,000 individuals. Highest densities were observed in the Strait of Georgia, with an average of 3.1 individuals per kilometer of shoreline. Over the years, there have been occasional but rare sightings of other marine mammal species such as Steller and California sea lions, northern fur seal, and harbour porpoise. Killer whale, Pacific white-sided dolphin, false killer whale, grey whale, humpback whale and minke whale have also made the occasional appearance in Burrard Inlet or nearby waters, though their use of this habitat is limited. For additional information on marine mammals in Burrard Inlet, please refer to the Marine Resources – Westridge Marine Terminal Technical Report (Volume 5C, Technical Report 5C-13, Stantec Consulting Ltd. December 2013, Filing ID A3S2R7).	provide the seasonal distribution patterns and estimated maximum numbers. The bird population at the Maplewood Conservation Area fluctuates significantly throughout the year, depending upon the season. The District is seeking assurance that during periods of peak bird population, the wildlife recovery contractor retained by KMC is equipped to deal with the numbers of birds that could potentially be affected in the event of an oil spill reaching the Maplewood mudflats.	Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required.
2.9.2(b)	Please provide details on the maximum wildlife population numbers that can be managed by the Wildlife Care Centre at the current time.	The Application, Volume 7, Section 4.8 outlines the process to enhance Kinder Morgan Canada Inc.'s (KMC) existing emergency management programs (EMP) as they relate to the Trans Mountain Pipeline system (TMPL system) to address the needs of the Project (Filing ID A3S4V5). The final programs will be developed in a manner consistent with the National Energy Board's (NEB or Board) draft conditions related to emergency response (Filing ID A3V8Z8). Although the information requested is not within the scope of this proceeding and not relevant to the NEB List of Issues, Trans Mountain Pipeline ULC (Trans Mountain) offers the following response to your question: Recovery and treatment of impacted wildlife is a very specialized	See DNV IR 2.9.2a. Also, the District disagrees that the "information requested is not within the scope of this proceeding and not relevant to the NEB List of Issues". This request relates to the following issues on the NEB's List of Issues: Issue #5 – potential environmental and socio-economic effects of marine shipping activities that would result from the proposed Project, including the potential effects of accidents or malfunctions that may occur; Issue #11 – contingency planning for spills, accidents or malfunctions, during construction	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required.

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		discipline requiring specific training and equipment. KMC has a wildlife recovery contractor with federal migratory permits and provincial rehabilitation permits on contract for immediate response to an incident across the TMPL system. The contractor will respond with the appropriate scale of equipment and trained personal as the situation requires. Refer to response to District of North Vancouver 2.01.1b.	and operation of the project; and Issue #2 – safety and security during construction of the proposed project and operation of the project, including emergency response planning and third- party damage prevention.	
2.09.2(c)	Please provide details on the specific facility requirements for the successful care of oiled wildlife. Please provide details on pre-planning and pre- identification of potential sites for the Wildlife Care Centre.	Although the information requested is not within the scope of this proceeding and not relevant to the National Energy Board's (NEB) List of Issues, Trans Mountain Pipeline ULC (Trans Mountain) offers the following response to your question: Refer to response to District of North Vancouver IR No. 2.09.2b. Refer to response to District of North Vancouver IR No. 2.01.1b. In addition, Kinder Morgan Canada Inc. (KMC) has pre-designated Staging Area locations along the current pipeline corridor and in communities where its facilities are located that could serve as potential wildlife care centre sites. In British Columbia these locations include Burnaby, Richmond, City of Vancouver, Abbotsford, Chilliwack, Hope Merritt, Kamloops, Clearwater, Blue River and Valemount. In Alberta these locations include Jasper, Hinton, Edson, Gainford, Edmonton and Sherwood Park. In the unlikely event of a pipeline release resulting in oiled wildlife, the choice of location would depend upon where, along the Trans Mountain system the release occurred.	Insufficient detail in answer.	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required.
2.09.2(e)	Please confirm that all required resources and personnel are currently in place or available to support the Oiled Wildlife Plan for the Emergency Response Plan. If there are limitations to the required resources, please provide details on the limitations and the anticipated timeframe to address any gaps.	Refer to response to District of North Vancouver IR No. 2.09.2b.	Please provide details on the existing resources and personnel that are in place to support the oiled wildlife plan, including any limitations. Please provide details on any proposed changes if the Project is approved.	In accordance with Board Ruling No. 33 (Filing ID A63066), Trans Mountain's response provided sufficient information and detail for the Board in its consideration of the application and no further response is required.