

**Hearing Order OH-001-2014**  
**Trans Mountain Pipeline ULC (Trans Mountain)**  
**Application for the Trans Mountain Expansion Project**  
**Procedural Direction No. 3 – Process for hearing motions to compel full and adequate responses to information requests (IRs)**  
**Organizational chart for comments on inadequacy of IR responses (Province of BC IR No. 1 to Trans Mountain)**

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
1.1 a)	Please provide the geohazard event inventory.	A3S1C6, Application Volume 4A, Project Design & Execution - Engineering, Appendix H – Terrain Mapping and Geohazard Inventory provides the Geohazard inventory as filed with the Application. Geohazard assessment will be iterative and ongoing throughout detailed engineering and design as additional site specific information on individual geohazard sites are investigated. A preliminary geohazard assessment, including an updated geohazard inventory is currently being completed and will be provided as part of the risk assessment on Line 2 referred to in NEB IR No. 1.81a.	Appendix H is an inventory of potential geohazard sites, not the requested inventory of geohazard events. The Province requires the inventory of geohazard events in its evaluation of the overall risk of slope failure along the proposed pipeline route.
1.2 b)	For geohazards that may initiate as a result of pipeline construction and operation, what are the proponent's proposed geohazard risk acceptability criteria? How will the proponent determine whether human safety, environmental resources, infrastructure, private property, or other resources will face an acceptable level of risk from pipeline construction or operation?	As committed to in the response to NEB IR No. 1.81a, Trans Mountain will submit a risk assessment for Line 2 in Q3 of 2014. As described in the response to Allan R IR No. 1.171, this risk assessment is being undertaken in support of a risk-based design so that mitigation measures may be incorporated into the design to address the principal risks. In the context of this risk-based design, risk is defined as a compound measure of both failure likelihood (spill frequency) and consequences of a spill.	The request seeks to understand Trans Mountain's geohazard risk acceptability criteria in relation to geohazards that may result from <u>pipeline construction</u> , travel downslope, and affect the public or natural resources. The oil spill risk assessment described in the response is not relevant.
1.4 a)	How many SCADA alarms do all Kinder Morgan pipelines, including the TMPL system, experience, on average, in a	Trans Mountain is not prepared to provide detailed SCADA and /or leak detection alarm and shut down statistics for the	The List of Issues the National Energy Board has set for this review includes "safety and security during ... operation of

<sup>1</sup> All IR reference numbers follow the original numbering set out in IR #1 of the Province of BC, which was altered slightly in Trans Mountain's response.

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	<p>year? How many of these result in the initiation of shutdown? In those instances where there is a shutdown, what is the average length of time it takes a control centre operator to begin the shutdown process from the initial alarm? For this question 1.4 a), please break down your response by TMPL and other Kinder Morgan pipelines.</p>	<p>existing Trans Mountain pipeline system unless specifically requested to do so by the National Energy Board. The information request is not relevant to one of more of the issues identified in the National Energy Board's List of Issues for the Trans Mountain Expansion Project. However, in recognition of the interests of the Province of British Columbia, and specifically the provincial government's mandate to uphold the interests of all British Columbians, Trans Mountain commits to meet with the provincial government to further discuss the information request and work with them to provide the relevant information.</p>	<p>the project, including emergency response planning". Therefore, information regarding leak detection and pump shutdown is squarely within the scope of the issues identified by the Board.</p> <p>Information concerning the effectiveness of leak detection and the promptness of shutdowns on the existing TMPL system and all Kinder Morgan pipelines is directly relevant to the company's "track record" with respect to the safe operation of its pipelines. The Province requires such information in order to assess Trans Mountain's ability to operate the proposed pipeline safely.</p> <p>Further, Trans Mountain itself makes multiple references throughout the Application to KMC's leak detection and spill response: "The expanded TMPL system, like the existing TMPL system, will include the implementation of the state-of-the-art, real-time, transient, computational pipeline leak detection system, that is currently in service on the existing TMPL system. <u>KMC has a long and successful history with the implementation of these types of leak detection systems</u>, which are widely viewed as the most effective type of system for liquid petroleum transmission pipelines." [emphasis added] (A3S0Q7, Application Volume 1, Summary, Section 2.5: Operations and Maintenance. PDF p. 69 of 113).</p> <p>Trans Mountain's repeated reliance on KMC's history as an experienced pipeline operator invites scrutiny. It is therefore not open to Trans Mountain to argue that KMC's leak detection and pipeline shutdown history is not relevant to the issues in this proceeding.</p> <p>Trans Mountain's offer to meet with the Province to provide the "relevant information" is of no assistance in the context</p>

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			of this review process. The Province respectfully requests that its request be answered on the record.
1.4 b)	What proportion of spills from all Kinder Morgan pipelines, including the TMPL system, over the last 30 years were identified by a SCADA alarm? Please list these incidents, and for each one outline the duration of time between the alarms and initiating shut down, and how much material was spilled during this time interval.	The information request is 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. However, in recognition of the interests of the Province of British Columbia, and specifically the provincial government's mandate to uphold the interests of all British Columbians, Trans Mountain commits to meet with the provincial government to further discuss the information request and work with them to provide the relevant information.	<p>The List of Issues set by the National Energy Board for this review includes "safety and security during ... operation of the project, including emergency response planning". Therefore, information regarding leak detection and pump shutdown is squarely within the scope of the issues identified by the Board.</p> <p>Information concerning the effectiveness of leak detection and the promptness of shutdowns on the existing TMPL system and all Kinder Morgan pipelines is directly relevant to the company's "track record" with respect to the safe operation of its pipelines. The Province requires such information in order to assess Trans Mountain's ability to operate the proposed pipeline safely.</p> <p>Further, Trans Mountain itself makes multiple references throughout the Application to KMC's leak detection and spill response: "The expanded TMPL system, like the existing TMPL system, will include the implementation of the state-of-the-art, real-time, transient, computational pipeline leak detection system, that is currently in service on the existing TMPL system. <u>KMC has a long and successful history with the implementation of these types of leak detection systems</u>, which are widely viewed as the most effective type of system for liquid petroleum transmission pipelines." [emphasis added] (A3S0Q7, Application Volume 1, Summary, Section 2.5: Operations and Maintenance. PDF p. 69 of 113).</p> <p>Trans Mountain's repeated reliance on KMC's history as an experienced pipeline operator invites scrutiny. It is therefore not open to Trans Mountain to argue that KMC's leak</p>

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			<p>detection and pipeline shutdown history is not relevant to the issues in this proceeding.</p> <p>Trans Mountain's offer to meet with the Province to provide the "relevant information" is of no assistance in the context of this review process. The Province respectfully requests that its request be answered on the record.</p>
1.4 c)	<p>Would Trans Mountain agree to a certificate requirement pursuant to which operations would automatically shut down where the control centre identifies a potential leak from the pipeline, and the absence of a leak cannot be confirmed within 10 minutes? If not, why not?</p>	<p>If a potential pipeline leak was identified or suspected, the pipeline would be immediately shutdown and isolated according to procedures.</p> <p>Please refer to the response to Tseil-Waututh Nation IR 1.2.1.5.06a for more details on CCO training and response.</p>	<p>The request asks Trans Mountain to confirm whether it will commit to the <u>automatic</u> shutdown of the pipeline in the event a leak is suspected and is not ruled out within 10 minutes. The response does not answer the question.</p> <p>The response to Tseil-Waututh Nation IR 1.2.1.5.06a does not contain the required information.</p>
1.4 k)	<p>Does Trans Mountain take issue with any of the factual conclusions or findings made by the NEB? If so, please explain how Trans Mountain differs from the conclusions or findings.</p>	<p>The information request is not relevant to one of more of the issues identified in the National Energy Board's List of Issues for the Trans Mountain Expansion Project.</p>	<p>The List of Issues the National Energy Board has set for this review includes "safety and security during ... operation of the project, including emergency response planning". Therefore, information regarding leak detection and pump shutdown is squarely within the scope of the issues identified by the Board.</p> <p>Information concerning the effectiveness of leak detection and the promptness of shutdowns on the existing TMPL system is directly relevant to the company's "track record" with respect to the safe operation of its pipelines. The Province requires such information in order to assess Trans Mountain's ability to operate the proposed pipeline safely.</p> <p>The findings of the NEB upon investigation of the 2012 Sumas Tank leak are entirely relevant to Trans Mountain's ability to consistently follow internal leak detection and pipeline shutdown procedures. Trans Mountain's response to the NEB report is relevant to the company's ability to learn from past events and make improvements following</p>

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			regulatory investigation. Therefore, Trans Mountain is asked to comment on the NEB's findings with respect to the operational errors that resulted in the Sumas Tank leak.
1.6 a)	<p>Using a table format, please provide a full record of all spills from Kinder Morgan pipelines, including the TMPL system, involving liquid hydrocarbons over the past 30 years, including the following columns. Please include only those spills in respect of which the jurisdiction in which the spill event took place required the event to be reported (for example, if the jurisdiction requires all spills over 1m<sup>2</sup> to be reported).</p> <ul style="list-style-type: none"> <li>• Pipeline name;</li> <li>• Year built;</li> <li>• Month and year of spill;</li> <li>• Spill location (i.e., the km post);</li> <li>• Cause of spill;</li> <li>• Volume spilled;</li> <li>• Time from the event to the discovery of the spill;</li> <li>• Time to initiate the response;</li> <li>• Length of response;</li> <li>• Volume recovered;</li> <li>• Type of spill (e.g., pinhole, leak, rupture);</li> <li>• Detection method (for example, on-site, third party, automatic detection systems);</li> <li>• Reports, orders, finding or similar document prepared by a regulator within the relevant jurisdiction, or any other government agency.</li> </ul>	<p>The Trans Mountain Pipeline system (TMPL) was constructed from 1951 to 1953 and the expansion of this system is the subject of the Application. No other pipeline system operated by Kinder Morgan Canada Inc. is included in this Application; therefore, information requested unrelated to the expansion of the TMPL is not relevant to this Application. Please refer to the responses to NEB IR No. 1.70a and 1.70b as well as Eliesen M IR No. 1.10a. The Trans Mountain Pipeline ULC is regulated by the National Energy Board (NEB) and Province BC IR No.1.1.06a – Attachment 1 through Attachment 9 contain the associated documentation filed by the NEB and the Transportation Safety Board with respect to those incidents. Other government agencies may have reports related to these incidents and the question should be posed to those agencies.</p>	<p>The List of Issues set by the National Energy Board for this review includes “safety and security during ... operation of the project, including emergency response planning”. Therefore, information regarding prior spills is squarely within the scope of the issues identified by the Board.</p> <p>Attachment 1 through Attachment 9 contain information concerning a number of incidents, but do not provide a full record of all spills from pipelines operated by Kinder Morgan.</p> <p>Information concerning spills from the existing TMPL system and all Kinder Morgan pipelines is directly relevant to the company's “track record” with respect to the safe operation of its pipelines. The Province requires such information in order to assess Trans Mountain's ability to operate the proposed pipeline safely.</p> <p>Further, Trans Mountain itself refers to TMPL's spill history: “<u>TMPL's operating history and overall pipeline industry experience</u> demonstrate that large pipeline and facility spills are unlikely to occur” [emphasis added] (A3S0Q7, Application Volume 1, Summary, Section 1: Application and General Information, PDF p. 35 of 113).</p> <p>The Application also relies on KMC's Integrated Safety and Loss Management System: “The expanded TMPL system (which will include Line 1, comprised of existing active and inactive pipeline segments that will be reactivated, Line 2, comprised of existing active and new pipeline segments, and all associated pump stations, terminals, and ancillary facilities) will be operated and maintained in accordance</p>

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			<p>with the KMC Integrated Safety and Loss Management System (ISLMS).” [emphasis added] (A3S1L1, Application Volume 4C, Project Design and Execution – Operations and Maintenance, Section 2.1: Integrated Safety and Loss Management, PDF p.28 of 102).</p> <p>Trans Mountain's consistent reliance on KMC's history as an experienced pipeline operator invites scrutiny. Therefore, it is not open to Trans Mountain to argue that KMC's spill history is not relevant to the issues in this review process.</p>
1.6 b)	<p>Using the incidents from the above list, please provide a summary of any spills that are significant in terms of volume released, impacts to the environment, and/or lessons-learned. Please outline the steps and time required to (i) respond to the incident; and (ii) remediate and restore the environment. Please also describe the details of any post-incident debriefings, list the agencies and stakeholders that were invited and participated in the debriefings, and describe the lessons-learned and the steps that were subsequently put in to place to prevent similar events from reoccurring</p>	<p>Please refer to the responses to NEB IR No. 1.70a and 1.70b for the list of incidents that caused the Emergency Response Plan activation.</p> <p>The remainder of the information request is not relevant to one of more of the issues identified in the National Energy Board's List of Issues for the Trans Mountain Expansion Project. However, in recognition of the interests of the Province of British Columbia, and specifically the provincial government's mandate to uphold the interests of all British Columbians, Trans Mountain commits to meet with the provincial government to further discuss the information request and work with them to provide the relevant information.</p>	<p>The List of Issues the National Energy Board has set for this review includes “safety and security during ... operation of the project, including emergency response planning”. Therefore, information regarding prior spills, the management of and response to those spills, and any lessons learned from those events is squarely within the scope of the issues identified by the Board.</p> <p>Information concerning spills from the existing TMPL system and all Kinder Morgan pipelines is directly relevant to the company's “track record” with respect to the safe operation of its pipelines. The Province requires such information in order to assess Trans Mountain's ability to operate the proposed pipeline safely.</p> <p>Further, Trans Mountain itself refers to TMPL's spill history: “<u>TMPL's operating history and overall pipeline industry experience</u> demonstrate that large pipeline and facility spills are unlikely to occur” [emphasis added] (A3S0Q7, Application Volume 1, Summary, Section 1: Application and General Information, PDF p. 35 of 113).</p> <p>The Application also relies on KMC's Integrated Safety and Loss Management System: “The expanded TMPL system (which will include Line 1, comprised of existing active and</p>

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			<p><u>inactive pipeline segments that will be reactivated</u>, Line 2, comprised of existing active and new pipeline segments, and all associated pump stations, terminals, and ancillary facilities) will be operated and maintained in accordance with the KMC Integrated Safety and Loss Management System (ISLMS)." [emphasis added] (A3S1L1, Application Volume 4C, Project Design and Execution – Operations and Maintenance, Section 2.1: Integrated Safety and Loss Management, PDF p.28 of 102).</p> <p>Trans Mountain's consistent reliance on KMC's history as an experienced pipeline operator invites scrutiny. Therefore, it is not open to Trans Mountain to argue that KMC's spill history is not relevant to the issues in this review process.</p> <p>The responses to NEB IR No. 1.70a and 1.70b do not provide the detailed information requested by the Province.</p>
1.9 a)	<p>Please provide a copy of Trans Mountain's emergency response plan and any other plan that describes what the company does in the event of a spill. Without limitation, please provide the control point and field guide manuals referenced in the preamble.</p>	<p>There is an error in Volume 7, Section 4.8.1.2 of the Application where it states that Kinder Morgan Canada (KMC) "is willing to provide copies of the emergency response and any other plan that describes what the company does in the event of a spill, upon request by any member of the public that has an interest in the operations of Trans Mountain Pipeline." The Emergency Management Program (EMP) documents contain information which is proprietary and of a sensitive nature, and due to security concerns it is not publically available, nor will it be made publically available. KMC is willing to provide copies of the EMP documents to local, provincial and federal authorities who satisfy the following conditions:</p> <ul style="list-style-type: none"> <li>· The authority has/is willing to participate in consultations with KMC;</li> <li>· The authority could be called upon to respond to an event</li> </ul>	<p>The List of Issues set by the National Energy Board for this review includes "safety and security during ... operation of the project, including <u>emergency response planning</u>" [emphasis added].</p> <p>Trans Mountain makes repeated references throughout the application to its emergency preparedness and response program, in support of the overall assertion that it will be able to respond effectively to any spill. It is critical that the NEB, the Province and other intervenors be able to evaluate the adequacy of such program. Trans Mountain's offer to provide copies of the EMP documents to local, provincial and federal authorities on a confidential basis is of no assistance in the context of this review process.</p> <p>Trans Mountain asserts that its Emergency Management Program documents contain information which is proprietary and of a sensitive nature. Trans Mountain provides no</p>

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		<p>associated with the Trans Mountain Pipeline system within their jurisdiction;</p> <ul style="list-style-type: none"> <li>· The authority has requested a copy and/or requires a copy by legislation, and</li> <li>· The authority has signed a confidentiality agreement and/or has a method by which the document can be filed confidentially.</li> </ul>	<p>evidence to substantiate such a claim.</p> <p>However, if the nature of the information contained in these documents is such that they cannot be filed on the public record, then the Province asks that Trans Mountain file the documents along with a request, pursuant to the Filing Manual, that the NEB treat them confidentially. The Province reserves the right to make argument on the suitability of the documents being filed on a confidential basis.</p>
1.9 b)	<p>Using the provided table format, please state which aspects of the Emergency Management Program are regulatory requirements, which aspects have come about as part of voluntary commitments, and provide a source for the regulatory requirement or equipment. Within the same table, where applicable please explicitly state where there are numerical (or quantitative measures) associated with the Program (e.g., a required response time or equipment level, or type of training certification).</p>	<p>The information request is not relevant to one of more of the issues identified in the National Energy Board's List of Issues for the Trans Mountain Expansion Project. However, in recognition of the interests of the Province of British Columbia, and specifically the provincial government's mandate to uphold the interests of all British Columbians, Trans Mountain commits to meet with the provincial government to further discuss the information request and work with them to provide the relevant information.</p>	<p>The List of Issues set by the National Energy Board for this review includes "safety and security during ... operation of the project, including <u>emergency response planning</u>" [emphasis added]. The List of Issues also includes "the terms and conditions to be included in any approval the Board may issue".</p> <p>Draft conditions No. 2 and 3 issued by the NEB on April 16, 2014 requires the Project to be operated in accordance with, at a minimum, the standards, policies, mitigation measures, procedures and other information included or referred to in the Application or otherwise committed to during the proceeding.</p> <p>Therefore, the Province requires that those aspects of the Emergency Management Program which are voluntary commitments be clearly identified, so that they may be captured by draft conditions No. 2 and 3.</p>
1.10 f)	<p>Please outline all those sections of the pipeline where planning is specifically required due to remoteness or challenging geography. What strategies does Trans Mountain maintain, and what equipment does it have access to, to address potential spills along these sections</p>	<p>Please refer to the response to NEB IR No. 1.71.</p> <p>The Application, Volume 7, Section 4.8 outlines the process to enhance Kinder Morgan Canada's existing emergency management programs as they relate to the Trans Mountain Pipeline system to address the needs of Project. The final</p>	<p>This request is not fully answered. Volume 7 of the Application provides general information on KMC's existing emergency management programs only, and does not supply the required information – if it did, the Province would not have requested additional information.</p>

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	throughout all seasons and environmental operating conditions?	programs will be developed in a manner consistent with the National Energy Board's draft conditions.	The response to NEB IR No. 1.71 provides one example of a challenging location, but does not identify all sections of the pipeline where specific planning is required due to remoteness or challenging geography.
1.10 h)	Please provide the helicopter deployment plan for Jasper, including how the OSCAR is to be transported by helicopter, and the helicopters that are available to transport the unit. Last, please state the geographic scope these helicopters would be expected to cover.	<p>The decision to transport equipment by helicopter is made by the Incident Command Post at the time of an incident. While the equipment owned by Kinder Morgan Canada (KMC) has been packaged so it can be transported by helicopter, flight plans and deployment plans have not been developed for specific locations, due to the various unknown conditions that would be present at the time of an incident.</p> <p>Application Volume 7, Section 4.8 outlines the process to enhance KMC's existing emergency management programs as they relate to the Trans Mountain Pipeline system to address the needs of the Trans Mountain Expansion Project. The final programs will be developed in a manner consistent with the National Energy Board's draft conditions 42, 52, 53 and 54.</p>	<p>The response does not provide any information with respect to the helicopters available and the geographic scope they would be expected to cover. Please note that, although the response refers to them, flight plans are being requested.</p> <p>Volume 7 of the Application provides general information on KMC's existing emergency management programs only, and does not supply the required information – if it did, the Province would not have requested that this information be provided.</p>
1.10 m)	Please provide a table indicating the location of all equipment, and the certified responders required to operate that equipment, available to Trans Mountain in the event of a spill, from CEPA members under the mutual aid agreement that Trans Mountain references in the application. The table should include a complete listing of the type and quantity of equipment, the number and certification of the responders, and the activation and response times to each 10-kilometer stretch of the TMPL, and all river control points that have been identified by Trans Mountain.	<p>The information request is not relevant to one of more of the issues identified in the National Energy Board's List of Issues for the Trans Mountain Expansion Project (TMEP). However, in recognition of the interests of the Province of British Columbia, and specifically the provincial government's mandate to uphold the interests of all British Columbians, Trans Mountain commits to meet with the provincial government to further discuss the information request and work with them to provide the relevant information.</p> <p>In the Application, Volume 7, Section 4.8 outlines the process to enhance Kinder Morgan Canada's existing emergency management programs as they relate to the Trans</p>	<p>The List of Issues the National Energy Board has set for this review includes "safety and security during ... operation of the project, including <u>emergency response planning</u>" [emphasis added]. As a result, information concerning spill response equipment and spill responders is squarely within the scope of the List of Issues.</p> <p>Trans Mountain's offer to meet with the Province to provide the "relevant information" is of no assistance in the context of this review process. The Province respectfully requests that its request be answered on the record.</p> <p>Volume 7 of the Application provides general information on KMC's existing emergency management programs only,</p>

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		Mountain Pipeline system to address the needs of TMEP. The final programs will be developed in a manner consistent with the National Energy Board's draft conditions related to emergency response.	and does not supply the required information – if it did, the Province would not have requested additional information.
1.12 a)	<p><b>Preamble:</b> Trans Mountain states that: <i>As part of regular maintenance, a review and update of all current KMC ERPs, and the ICS Guide was completed in 2013. <u>The existing plans and guides will be used as the foundation for the development of enhanced plans and guides for the Project.</u></i> [emphasis added] Please provide the report or other document that resulted from the review referenced in line 1 of the paragraph above.</p>	The information request is not relevant to one of more of the issues identified in the National Energy Board's List of Issues for the Trans Mountain Expansion Project. However, in recognition of the interests of the Province of British Columbia, and specifically the provincial government's mandate to uphold the interests of all British Columbians, Trans Mountain commits to meet with the provincial government to further discuss the information request and work with them to provide the relevant information.	<p>The List of Issues set out by the National Energy Board for this review includes "safety and security during ... operation of the project, including <u>emergency response planning</u>" [emphasis added]. Therefore, information regarding KMC's current Emergency Response Plans and their review or update is squarely within the scope of the issues identified by the Board, particularly since they form the foundation for the development of the plans that will be used for the Project.</p> <p>The Province requires such information in order to assess Trans Mountain's ability to respond effectively to any spill from the proposed pipeline. Further, Trans Mountain itself refers to KMC's ERPs and their review and update, and makes numerous references to the subsequent development of "enhanced" plans for the Project. Therefore, it is not open to Trans Mountain to argue that these plans are not relevant to the issues in this review process.</p> <p>Trans Mountain's offer to meet with the Province to provide the "relevant information" is of no assistance in the context of this review process. The Province respectfully requests that its request be answered on the record.</p>
1.12 b)	Please detail how each aspect of the Emergency Response Plan will be enhanced.	The Application, Volume 7, Section 4.8 outlines the process to enhance Kinder Morgan Canada's existing emergency management programs as they relate to the Trans Mountain Pipeline system to address the needs of the Project. The final programs will be developed in a manner consistent with the	The Province seeks to understand how precisely the Emergency Response Plan will be enhanced. In the absence of a detailed description of the proposed plan, the NEB, the Province, and other intervenors remain unable to evaluate the strength of Trans Mountain's emergency response

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		National Energy Board's draft conditions.	program. Volume 7 of the Application provides high-level information on the planned enhancement of KMC's existing emergency management programs, and does not supply the required information – if it did, the Province would not have requested this information.
1.12 c)	<p>Can Trans Mountain provide the same information requested in question 1.9(a) for the units that will exist assuming the TMEP is completed? If not, why not?</p> <p>Question 1.9 a) asks the following: Please provide a copy of Trans Mountain's emergency response plan and any other plan that describes what the company does in the event of a spill. Without limitation, please provide the control point and field guide manuals referenced in the preamble.</p>	<p>The information request is not relevant to one of more of the issues identified in the National Energy Board's List of Issues for the Trans Mountain Expansion Project. However, in recognition of the interests of the Province of British Columbia, and specifically the provincial government's mandate to uphold the interests of all British Columbians, Trans Mountain commits to meet with the provincial government to further discuss the information request and work with them to provide the relevant information.</p>	<p>The List of Issues set out by the National Energy Board for this project includes "safety and security during ... operation of the project, including <u>emergency response planning</u>" [emphasis added].</p> <p>Trans Mountain makes repeated references throughout the application to the "enhanced" emergency preparedness and response program for the expanded pipeline, in support of the overall assertion that it will be able to respond effectively to any spill. It is critical that the NEB, the Province and other intervenors be able to evaluate the adequacy of Trans Mountain's response program.</p> <p>Trans Mountain's offer to meet with the Province to provide the "relevant information" is of no assistance in the context of this review process. The Province respectfully requests that its request be answered on the record.</p>
1.12 d)	<p>If the answer to question (c) is negative, please provide details regarding:</p> <p>(i) the current status of Trans Mountain's plans for developing this information;</p> <p>(ii) the terms of reference or mandate for those preparing this information;</p> <p>(iii) any drafts of this information that has been completed to date;</p>	<p>The Application, Volume 7, Section 4.8 outlines the process to enhance Kinder Morgan Canada's existing emergency management programs as they relate to the Trans Mountain Pipeline system to address the needs of the Project. The final programs will be developed in a manner consistent with the National Energy Board's draft conditions related to emergency management.</p>	<p>The Province seeks to understand how precisely the Emergency Response Plan will be enhanced. In the absence of a detailed description of the proposed plan, the NEB, the Province, and other intervenors remain unable to evaluate the strength of Trans Mountain's emergency response program</p> <p>Volume 7 of the Application provides high-level information on the planned enhancement of KMC's existing emergency management programs, and does not supply the required</p>

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	(iv) the timing for this information to be finalized .		information – if it did, the Province would not have sought that this information be provided in response to an Information Request.
1.12 e)	Will the enhanced Emergency Response Plan be designed to address the potential for an incident that impacts both Line 1 and Line 2 simultaneously? If so, please detail how this will be done.	The Application, Volume 7, Section 4.8 outlines the process to enhance Kinder Morgan Canada's existing emergency management programs as they relate to the Trans Mountain Pipeline system to address the needs of the Project. The final programs will be developed in a manner consistent with the National Energy Board's draft conditions related to emergency management.	The Province seeks to understand how precisely the Emergency Response Plan will be enhanced. In the absence of a detailed description of the proposed plan, the NEB, the Province, and other intervenors remain unable to evaluate the strength of Trans Mountain's emergency response program. Volume 7 of the Application provides high-level information on the planned enhancement of KMC's existing emergency management programs, and does not supply the required information – if it did, the Province would not have requested this information.
1.12 j)	Please detail how the enhanced plans will be exercised in advance of their finalization in order to demonstrate their effectiveness.	The Application, Volume 7, Section 4.8 outlines the process to enhance Kinder Morgan Canada's existing emergency management programs as they relate to the Trans Mountain Pipeline system to address the needs of the Project, which includes the training and exercise program. The final programs will be developed in a manner consistent with the National Energy Boards draft conditions related to emergency management.	The Province seeks to understand how the enhanced plans will be exercised. By providing an opportunity to put the plans into practice and ensure that response capability is adequate, emergency response exercises are a crucial component of emergency response planning. Volume 7 of the Application provides high-level information on the planned enhancement of KMC's existing emergency management programs, and does not supply the required information – if it did, the Province would not have requested this information.
1.12 k)	In this question 1.12(k), and in 1.12(l), "geographic response plans" (GRP) means plans that identify the specific equipment and personnel needed to respond to spills in a specific geographic context following an analysis of the physical features and logistical requirements at a	Kinder Morgan Canada (KMC) maintains a series of Control Points as well as a geographic information system which includes environmentally sensitive areas as well as other information. These are common elements of a Geographic Response Plan. Application Volume 7, Section 4.8 outlines	Volume 7 of the Application provides high-level information on the planned enhancement of KMC's existing emergency management programs, and does not supply any detailed information regarding geographic response plans – if it did, the Province would not have requested that this information

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
	<p>given location.</p> <p>Does Trans Mountain maintain GRPs for potential spills along the pipeline route? If so, please provide them.</p>	<p>the process to enhance KMC's existing emergency management programs as they relate to the Trans Mountain Pipeline system to address the needs of the Trans Mountain Expansion Project. The final programs will be developed in a manner consistent with the National Energy Board's draft conditions 42, 52, 53 and 54.</p> <p>The Emergency Management Program (EMP) documents contain information which is proprietary and of a sensitive nature, due to security concerns it is not publically available. KMC is willing to provide copies of the EMP documents to local, provincial and federal authorities who satisfy the following conditions;</p> <ul style="list-style-type: none"> <li>· The authority has/is willing to participate in consultations with KMC;</li> <li>· The authority could be called upon to respond to an event associated with the Trans Mountain Pipeline system within their jurisdiction;</li> <li>· The authority has requested a copy and/or requires a copy by legislation, and</li> <li>· The authority has signed a confidentiality agreement and/or has a method by which the document can be filed confidentially.</li> </ul>	<p>be provided in response to an Information Request.</p> <p>Trans Mountain asserts that its Emergency Management Program documents contain information which is proprietary and of a sensitive nature. Trans Mountain provides no evidence to substantiate such a claim.</p> <p>However, if the nature of the information contained in these documents is such that they cannot be filed on the public record, then the Province asks that Trans Mountain file the documents along with a request, pursuant to the Filing Manual, that the NEB treat them confidentially. The Province reserves the right to make argument on the suitability of the documents being filed on a confidential basis.</p>
1.12 1)	<p>Does Trans Mountain intend to produce updated GRPs in the event that the TMEP approved? If so, please respond to question (d) to (g) with respect to GRPs. If not, why not?</p>	<p>The Application, Volume 7, Section 4.8 outlines the process to enhance Kinder Morgan Canada's (KMC) existing emergency management programs as they relate to the Trans Mountain Pipeline system to address the needs of the Project, which includes the current control points manuals (geographic response plans [GRPs]). The final programs will be developed in a manner consistent with the National Energy Board's draft conditions related to emergency</p>	<p>Volume 7 of the Application provides high-level information on the planned enhancement of KMC's existing emergency management programs, and does not supply any detailed information regarding geographic response plans – if it did, the Province would not have requested additional information.</p> <p>The response to NEB IR No. 1.74 does not provide the required information.</p>

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
		<p>management.</p> <p>Please also refer to the response to NEB IR No. 1.74.</p>	
1.15 a)	<p>Please provide a detailed summary of all community awareness activities conducted by Trans Mountain in British Columbia over the last 5 years, and of all additional community awareness activities Trans Mountain plans to conduct if the Project is approved. The answer should consider communities along the pipeline route and coastal communities near the tanker routes, as well as any community that could be impacted by a land-based or marine spill.</p>	<p>Pipeline safety is Trans Mountain's number one priority. As stated in Kinder Morgan Canada's (KMC) Environment, Health and Safety policy which can be found in Section 4.2.2 in Volume 7 of the Application: "Every employee is expected to share Kinder Morgan's commitment to pursue the goal of not harming people, protecting the environment, using material and energy efficiently and promoting best practices..."</p> <p>KMC, as the operator of the Trans Mountain Pipeline system (TMPL), confirms it has carried out a community awareness program as part of its overall damage prevention program that meets or exceeds the requirements of the NEB's <i>Onshore Pipeline Regulations</i> (OPR), including activities over the past 5 years. As these past activities are not related to the proposed Project and not relevant to the List of Issues provided by the NEB, KMC will not be providing the requested summary. With respect to the proposed Project, KMC's program is continually evolving as it endeavours to meet the changing needs of its stakeholders and regulatory requirements. If the Project is approved KMC will assess the need for additional public awareness requirements, beyond what is already a regulatory requirement, and make any necessary changes.</p>	<p>The List of Issues set by the National Energy Board for this project includes "safety and security during ... operation of the project, including emergency response planning". Community awareness activities are an integral part of emergency preparedness response planning. Information regarding past community awareness activities carried out by Trans Mountain is directly relevant to the company's "track record" with respect to the safe operation of its pipelines and to the success of its work with the communities along the pipeline route. The Province requires such information in order to assess Trans Mountain's overall ability to operate the proposed pipeline safely.</p> <p>Further, Trans Mountain itself refers to KMC's Public Awareness Program as "an integral component of the organization's Damage Prevention Program" (see preamble). KMC's Public Awareness Program is discussed in the Application. Therefore, it is not open to Trans Mountain to argue that these past activities are not related to the Project and therefore not relevant to the issues in this proceeding.</p>
1.16 a)	<p>Please provide details on the processes and practices Trans Mountain employs for conducting post-spill debriefs and lessons-learned reviews, including participation, funding, implementation and tracking of lessons-learned.</p>	<p>Kinder Morgan Canada conducts an internal review of the response actions. The response actions review is conducted by survey, and a workshop to review the response. External agencies who participate in the incident command system structure are invited to participate in the survey and workshop, however participation is voluntary. Any</p>	<p>The response does not contain the detail requested with respect to <u>participation funding</u>.</p>

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
		actionable items that come from the survey and/or workshop are tracked on an internal action tracker until the item is complete.	
1.16 b)	Please provide any Trans Mountain corrective action plans or similar reports that have resulted from lessons-learned reviews following spill events.	<p>Please refer to the responses to NEB IR No. 1.69a and 1.69b for learnings related to exercises, and the responses to NEB IR No. 1.70a and 1.70b for learnings related to past spill events.</p> <p>Internal reports of this nature are confidential and 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.</p>	<p>The List of Issues the National Energy Board has set for this review includes "safety and security during ... operation of the project, including <u>emergency response planning</u>" [emphasis added]. Lessons learned from spill events are directly relevant to emergency response planning and are key evidence in the evaluation of Trans Mountain's ability to operate its pipelines safely.</p> <p>The responses NEB IR No. 1.69a and 1.69b provide a high-level summary of exercises that have occurred and a table summary of lessons learned containing very few details. The responses to NEB IR No. 1.70a and 1.70b list recent incidents on the line provide a brief description of the types of lessons learned, which lacks detail and specificity. None of these responses supply the corrective action plans or similar reports requested.</p> <p>Trans Mountain asserts that the requested reports are confidential; however, no evidence is offered to substantiate such a claim. In the absence of such evidence, the Province respectfully requests that the requested reports be filed.</p>
1.16 d)	For the third party strike on the Westridge Pipeline in 2007 specifically, please provide a copy of the lessons-learned debrief, action items identified, and evidence demonstrating the implementation and follow-up on the items identified. What enhancements to Trans Mountain's emergency response program occurred, if any, as a result of this information?	<p>Please refer to the response to NEB IR No. 1.69b.</p> <p>Internal reports of this nature are confidential and 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.</p>	<p>The List of Issues set by the National Energy Board for this review includes "safety and security during ... operation of the project, including <u>emergency response planning</u>" [emphasis added]. Lessons learned from the 2007 third party strike are directly relevant to emergency response planning and are key evidence in the evaluation of Trans Mountain's ability to operate its pipelines safely.</p> <p>Trans Mountain asserts that the requested reports are</p>

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
			<p>confidential; however, no evidence is offered to substantiate such a claim. In the absence of such evidence, the Province respectfully requests that the requested reports be filed.</p> <p>The Province also asks that the question posed in the latter part of the request be answered.</p>
1.16 f)	<p>Please provide:</p> <p>i) copies of all NEB audits related to emergency spill prevention, preparedness or response concerning the TMPL system;</p> <p>ii) the corrective measures ordered or recommended by the NEB as a result of these audits;</p> <p>iii) evidence confirming that Trans Mountain carried out the measures.</p>	<p>The National Energy Board (NEB) audits regulated companies' Integrated Safety and Loss Management Systems as required in the <i>Onshore Pipeline Regulations</i>. The NEB also reviews the Kinder Morgan Canada Inc. (KMC) emergency response program manuals and participates in Company emergency response exercises. The KMC emergency response program has not been audited by the NEB in the last 5 years. KMC audit records from earlier 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.</p>	<p>The List of Issues set out by the National Energy Board for this review includes "safety and security during ... operation of the project, including emergency response planning". NEB audits, any corrective measures ordered or recommended, and the implementation of such measures are directly relevant to Trans Mountain's ability to operate its pipelines safely.</p> <p>The response offers no explanation for the assertion that KMC audit records extending beyond the last five years are not relevant.</p>
1.18	<p>Has Trans Mountain done an assessment to determine which of the water bodies crossed by the current pipeline have the potential for OMA formation if there was a spill into them? If yes, can Trans Mountain please provide this assessment? If no assessment has been done, why not?</p>	<p>Conditions favourable to the formation of oil-mineral (or particulate) aggregates (OMA) require a high suspended sediment load in conjunction with high mixing energy. Trans Mountain studied data and used models to assess the potential for OMA formation at selected sites in marine areas, in the lower Fraser River and the North Thompson River. For detailed information on these assessments, please see the responses to NEB IR No. 1.62a, NEB IR No. 1.62b, and Province BC IR No. 1.1.19.</p>	<p>In order to inform its evaluation of Trans Mountain's ability to respond to an event involving submerged oil, the Province seeks to understand the potential for OMA formation in <u>all</u> water bodies potentially affected by a spill.</p> <p>The request asks Trans Mountain whether it had identified <u>all</u> water bodies with the potential for OMA formation, and requests an explanation in the event such assessment has not been done. The response provides information with respect to OMA formation in the lower Fraser River and the North Thompson River. As a result, it is only marginally responsive to the request.</p>
1.20 b)	<p>What training and/or certification is required to apply these techniques? How many Trans Mountain dedicated and supplemental responders have specific training and</p>	<p>Please refer to the responses to Katzie FN IR No. 1.11b and 1.11d.</p>	<p>The request seeks specific information concerning the numbers, training, certification and experience of responders with respect to the location, tracking and recovery of oil</p>

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
	experience in locating, tracking, and recovering submerged oil?		submerged in freshwater. The responses to Katzie FN IR No. 1.11b and 1.11d do not provide the requested information.
1.20 c)	What additional equipment is required to locate, track, and recover sunken or submerged oil? Please describe the equipment that Trans Mountain has internally (i.e. dedicated) and how much does it have access to through supplemental sources such as its mutual aid agreements, response organizations, and response contractors?	Location and tracking of sunken or submerged oil will be a Shoreline Cleanup Assessment Technique (SCAT) function through the Unified Command (UC) / Incident Command structure (ICS). It will be incumbent upon the UC to assemble the requisite expertise and resources to achieve this assignment. Location techniques can be quite simple, such as through the use of sorbent sampling devices and sediment agitation, or location can be more complex through the use of side-scan sonar and remotely operated vehicles (ROVs). Because of their ability to manage large databases containing assessment data, SCAT will likely be assigned to track sunken or submerged oil.  Please refer to the responses to Katzie FN IR No. 1.11b and 1.11d for information on the recovery sunken or submerged oil.	The Province seeks to achieve a better understanding of the equipment available to Trans Mountain for the recovery of sunken or submerged oil.  The request asks Trans Mountain to identify the equipment it holds internally or has access to through external sources for the location, tracking and recovery of sunken or submerged oil. While the response makes reference to the role of the UC in determining the actions to be taken during spill response, it fails to answer the specific question regarding the equipment available for the recovery of sunken oil.
1.20 e)	Does Trans Mountain maintain a submerged oil response plan? If so, please produce it.	Yes, the response tactics for submerged oil has been added to the Emergency Response Plan as part of the 2014 annual update which will be distributed to plan holders by the end of July 2014. The Emergency Management Program (EMP) documents contain information which is proprietary and of a sensitive nature, due to security concerns it is not publically available. Kinder Morgan Canada (KMC) is willing to provide copies of the EMP documents to local, provincial and federal authorities who satisfy the following conditions;  · The authority has/is willing to participate in consultations with KMC;  · The authority could be called upon to respond to an event	Trans Mountain makes repeated references throughout the application to its emergency preparedness and response program, in support of the overall assertion that it will be able to respond effectively to any spill. It is critical that the NEB, the Province and other intervenors be able to evaluate the adequacy of Trans Mountain's program. Trans Mountain's offer to provide copies of the EMP documents to local, provincial and federal authorities on a confidential basis is of no assistance in the context of this review process.  Trans Mountain asserts that its Emergency Management Program documents contain information which is proprietary and of a sensitive nature. Trans Mountain provides no

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
		<p>associated with the Trans Mountain Pipeline system within their jurisdiction;</p> <ul style="list-style-type: none"> <li>· The authority has requested a copy and/or requires a copy by legislation, and</li> <li>· The authority has signed a confidentiality agreement and/or has a method by which the document can be filed confidentially.</li> </ul>	<p>evidence to substantiate such a claim.</p> <p>However, if the nature of the information contained in these documents is such that they cannot be filed on the public record, then the Province asks that Trans Mountain file the documents along with a request, pursuant to the Filing Manual, that the NEB treat them confidentially. The Province reserves the right to make argument on the suitability of the documents being filed on a confidential basis.</p>
1.22 c)	<p>What specific training and equipment related to oil spill response does Trans Mountain intend to provide to aboriginal communities and how would this be sustained over the life time of the project?</p>	<p>Training and equipment allocation considerations are currently underway. Please refer to Province BC IR No 1.1.22a for details on timing and execution.</p>	<p>Trans Mountain states in its application that the integration of aboriginal communities into emergency response planning and programs would result in reduced response times in some locations and additional workforce to respond to a spill. The Province seeks information on the training and equipment that Trans Mountain would provide to aboriginal communities.</p> <p>Neither this response, nor the response to Province BC IR No. 1.22 a), provides the requested information.</p>
1.23 c)	<p>Has Trans Mountain identified potential Incident Command Posts with sufficient space and required resources (phone lines, internet connectivity, etc.) to house a multi-agency response (i.e. federal, provincial, local government, First Nation, and key stakeholders) within British Columbia in communities along the existing pipeline route? If so, please provide documentation showing Trans Mountain's identification and evaluation of these potential command posts.</p>	<p>Yes, Kinder Morgan Canada has pre-identified potential Incident Command Posts capable of housing a multi-agency response in communities along the pipeline route. The potential Incident Command Posts pre-identified can accommodate the Incident Management Team, contractors, and agency personnel. Locations have multiple telephone lines already installed, pre-defined setup for the ICS Sections, and breakout rooms for Government agencies, Unified Command meetings, etc.</p> <p>The list of potential incident command posts forms part of Kinder Morgan Canada's Emergency Response Plans (ERPs). The ERPs contain detailed documentation in terms</p>	<p>Trans Mountain asserts that the list of potential incident command posts forms part of Kinder Morgan's Emergency Management Program documents. Such documents allegedly contain information which is "of a confidential or commercially sensitive nature", which precludes their filing on the record. Trans Mountain provides no evidence to substantiate such a claim.</p> <p>However, if the nature of the information contained in these documents is such that they cannot be filed on the public record, then the Province asks that Trans Mountain file the documents along with a request, pursuant to the Filing Manual, that the NEB treat them confidentially. The</p>

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
		<p>of procedures, staffing, and other relevant information of the various response resources. These can be made available to Province of BC however due to the confidential or commercially sensitive nature of some information they contain, the full plans cannot be attached to this response and made part of the public record. For further information on the process for Province of BC obtaining copies of one or more of Kinder Morgan Canada's ERPs, please refer to Province BC IR No. 1.1.09a.</p>	<p>Province reserves the right to make argument on the suitability of the documents being filed on a confidential basis.</p>
1.23 e)	<p>Is Trans Mountain prepared to ensure automatic funding is available up front to municipalities to participate in incident management immediately once the need arises?</p>	<p>Kinder Morgan Canada (KMC), as the operator of Trans Mountain, cannot speculate as to the different conditions under which costs may arise as a result of an emergency, but can confirm it is responsible for all of its legal liabilities.</p> <p>As described in Section 4.3.1 of Volume 7, KMC uses the Incident Command System (ICS) structure to work co-operatively with the municipal first responders and emergency managers in the unlikely event of an emergency.</p> <p>Included in the ICS is a Unified Command structure for co-ordination with the multiple levels of government; federal, provincial, municipal, and Aboriginal communities, along the pipeline. In the event of an emergency, these authorities would be notified and involved as appropriate (refer to Table 4.3.1, Section 4.3.1 of Volume 7 for the three tiered response structure). It is KMC's preference to enter into a Unified Command with the municipal, provincial and federal agencies to ensure a safe and thorough response to any emergency.</p> <p>The needs for fire, police and health services greatly depend on the type of emergency. ICS is adaptable to different emergency scenarios and allows for quick identification of resources, and a method of procurement. The current</p>	<p>The request asks Trans Mountain to state whether it would provide automatic funding for the participation of municipalities in incident management. Neither this response, nor the response to Allan R IR No. 1.21j, answers the question.</p>

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
		<p>planning method calls for the replacement of municipal services with private firms as early as possible, with the approval of Unified Command.</p> <p>Please also refer to the response to Allan R IR No. 1.21j.</p>	
1.24 b)	<p>In table form, please provide a complete list of all specific HCAs that are crossed by both the current TMPL system, as well as the TMEP should it be constructed. Please ensure that included in this list are all HCAs that could be impacted should spilled oil enter a water body and be transported downstream from the spill (in this regard, please use modelling done in Volume 7's <i>Appendix C, Overland and Stream Flow Modelling of Potential Full-Bore Ruptures</i> to complete this assessment). Please utilize the following columns:</p> <ul style="list-style-type: none"> <li>· Name of specific HCA</li> <li>· Type of HCA</li> <li>· Kilometre posts (note the km posts where the HCAs/pipeline interact (e.g., it crosses x park at km post 1 and leaves x park at km post 5))</li> <li>· Line crossed (Line 1, Line 2, Line 1 and 2)</li> <li>· Downstream HCA (for HCAs that are downstream and would be impacted as a result of a spill to a water body)</li> </ul>	<p>As committed to in NEB IR No. 1.81a, Trans Mountain will submit a risk assessment for Line 2 in the third quarter of 2014. While detailed risk results will be provided at that time, the reporting format required by this IR is impractical for a variety of reasons. While some high consequence areas (HCAs) have names, not all do, and so it is not possible to comply with the first of the bullet points listed in the request in all cases. Also, while some HCAs might intersect the pipeline alignment, the risk assessment also considers those HCAs that do not intersect the pipeline alignment, but for which the modeled spill trajectory from the pipeline intersects. Therefore, it is not helpful to speak in terms of pipeline kilometre posts for the latter group of HCAs considered. Furthermore, apart from those Line 1 segments that form part of the Trans Mountain Expansion Project application, the bulk of Line 1 is not within the scope of this hearing, and as such, that portion of this information request is 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. However, in recognition of the interests of the Province of British Columbia, and specifically the provincial government's mandate to uphold the interests of all British Columbians, Trans Mountain commits to meet with the provincial government to further discuss the information request and work with them to provide the relevant information.</p> <p>The risk results will be reported for each 1 km segment of</p>	<p>Trans Mountain relies on the risk assessment for Line 2, which it says it will file in the third quarter of 2014, as justification for declining to provide the requested information. If the risk assessment is not filed before the deadline for the second round of IRs, then the Province and other intervenors will have no opportunity to test it. The Province respectfully requests that the risk assessment be made available for questioning by all parties in a timely manner.</p> <p>In addition, the risk assessment for Line 2 will not supply the requested information with respect to the current TMPL system. The Province seeks to understand the cumulative risk and combined effects of Line 1 and Line 2. No risk assessment for the Project can be complete if it fails to identify the HCAs that are crossed or that could be impacted by the <u>entire</u> expanded TMPL system, which, as stated in the Application, "will include Line 1, comprised of existing active and inactive pipeline segments that will be reactivated" (A3S1L1, Application Volume 4C, Project Design and Execution – Operations and Maintenance, Section 2.1: Integrated Safety and Loss Management, PDF p.28 of 102).</p> <p>Trans Mountain's offer to provide the relevant information in meeting with the Province is of no assistance in the context of this review process. The Province respectfully requests that Trans Mountain answer the request on the record so that the evidence filed may be reviewed and</p>

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
		<p>Line 2 as a length-averaged value of both failure frequency and consequence. Within each 1 km segment of pipeline, all HCAs for which a spill could potentially intersect (either directly, or indirectly by means of overland trajectory) will be listed by HCA type.</p> <p>In the risk assessment, the assumptions pertaining to the outflow analysis and overland and stream flow analysis on which the consequence analysis is based are as documented in Section 3.1.6 of Volume 7 of the Application (B18-1) and Appendix D of Volume 7 of the Application (B18-13), respectively.</p>	<p>evaluated by all parties to this proceeding.</p>
1.24 f)	<p>Please provide information on which provincial, federal and local governments, aboriginal communities, and other stakeholders were consulted or participated in developing the process used by Trans Mountain for HCA identification and ranking, and reviewed or participated in the actual process itself. If none, or only some of these groups participated, please indicate what Trans Mountain has done to review the outcomes of this work with these stakeholders to ensure the completeness and accuracy of, and agreement with, the rankings. If this has not been done, please explain why not.</p>	<p>In the United States, the US Department of Transportation Pipeline Hazardous Materials Safety Administration (PHMSA) regulations require operators of hazardous liquids pipelines to develop a process for identifying which pipeline segments could affect a High Consequence Area (HCA) (CFR Part 195 §195.452). Additionally, these Regulations provide strict definitions for what constitutes a High Consequence Area. Trans Mountain has elected to hold itself to these rigorous standards for its operations in Canada even though there is no comparable set of prescriptive requirements or HCA definitions under Canadian Regulations. In so doing, Trans Mountain has adopted HCA definitions that are as similar as possible to those defined under the US Part 195 Regulations. This has been done to provide a consistent platform for pipeline integrity analysis and risk analysis between Kinder Morgan Canada's Canadian and American operations. In some cases methodology has deviated from the PHMSA criteria because of differences in the datasets available between Canada and the United States. Where methods have deviated from the</p>	<p>The request asks Trans Mountain to identify the provincial, federal and local governments, aboriginal communities, and other stakeholders who were consulted or participated in developing the process for identifying and ranking HCAs, and who reviewed or participated in the actual process itself. The response lists a number of government data sources which were relied upon in identifying and establishing HCA locations. As such, the response does not answer the question posed.</p> <p>If no governments, communities and other stakeholders were directly consulted or participated in the process, then the request asks Trans Mountain to explain why. The response does not offer such an explanation.</p>

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
		<p>PHMSA criteria, a more conservative approach was used.</p> <p>Several government data sources were consulted in identifying and establishing the locations of HCAs, including the following:</p> <ul style="list-style-type: none"> <li>· British Columbia Ministry of Environment;</li> <li>· Natural Resources Canada;</li> <li>· Indian and Northern Affairs Canada;</li> <li>· Canada Post Corporation;</li> <li>· Canada National Parks Act;</li> <li>· Parks and Protected Areas Division, Alberta Community Development;</li> <li>· Alberta Sustainable Resource Development (ASRD), and the Fish and Wildlife Division;</li> <li>· Province of BC Fisheries Information Summary System (FISS) and the Consolidated Water body Surveys (CWS);</li> <li>· B.C. Conservation Data Centre (CDC);</li> <li>· Statistics Canada Community Profiles;</li> <li>· The Canada - Alberta Environmentally Sustainable Agriculture (CAESA) Soil Inventory Project (SIP);</li> <li>· The British Columbia Ministry of Environment and Parks Thematic Mapping Geographic Information System – CAPAMP;</li> <li>· Alberta Geological Survey, Alberta Research Council;</li> <li>· Geological Survey of Canada;</li> <li>· British Columbia Ministry of Energy and Mines;</li> <li>· Alberta Culture &amp; Community Spirit Listing of Historic Resources;</li> </ul>	

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
		· Province of BC Archaeology Branch	
1.25 a)	<p>For all four pipeline spill scenarios, please describe the response Trans Mountain would make to these spills. Please ensure this response covers all of the following:</p> <p>(i) the equipment and responders that would be deployed;</p> <p>(ii) the steps taken to transport equipment to the site of the spill and to the locations where spill response will take place;</p> <p>(iii) the precise tactics employed to respond to the spill;</p> <p>(iv) the actions taken to provide responders with the necessary accommodation and other support necessary to allow them to continue response activities;</p> <p>(v) the means by which recovered oil, as well as oiled boom, and other waste materials, will be stored and transported from recovery locations;</p> <p>(vi) the procedures for initiating and maintaining sampling and monitoring of air and water quality, including the area in which these would occur;</p> <p>(vii) the means by which recovered oil will be stored and transported from recovery locations; and</p> <p>(viii) assuming these scenarios represent a Level 3 spill (as described in <i>Table 4.3.1 Three-Tiered Response Structure</i>), a detailed explanation of how the escalation of spill response resources would be coordinated to respond to the spill beyond Trans Mountain's initial response.</p>	<p>Trans Mountain understands that the Province of British Columbia is seeking detailed information in regard to the emergency response measures for a variety of situations that could occur related to the Project, as well as existing operations. To that end, Trans Mountain and its operator, Kinder Morgan Canada Inc., are currently refining emergency management programs for the Project, as required by Section 32 of the National Energy Board's <i>Onshore Pipeline Regulations</i>. In recognition of the interests of the Province of British Columbia, and specifically the provincial government's mandate to uphold the interests of all British Columbians, Trans Mountain commits to meet with the provincial government to further discuss the information request and work with them to provide the relevant information.</p> <p>In the Application, Volume 7, Section 4.8 outlines the process to enhance Kinder Morgan Canada's existing emergency management programs as they relate to the Trans Mountain Pipeline system to address the needs of Trans Mountain Expansion Project. The final programs will be developed in a manner consistent with the National Energy Board's draft conditions related to emergency response.</p>	<p>The Province is indeed seeking detailed information in regard to the emergency response measures for a variety of situations that could occur related to the Project, as well as existing operations. Such information is essential to the evaluation of the practicability and effectiveness of spill response efforts in a variety of circumstances, and to the overall assessment of the safety of the Project.</p> <p>Volume 7 of the Application does not provide the requested information. Although Trans Mountain asserts in its response that it is still refining emergency management programs for the Project, it should be in a position, as an experienced pipeline operator, to provide the requested information at this time, so that it may be assessed by all parties to this proceeding.</p> <p>Trans Mountain's offer to provide the relevant information in meeting with the Province is of no assistance in the context of this review process. The Province respectfully requests that Trans Mountain answer the request on the record so that the evidence filed may be reviewed and evaluated by all parties.</p>
1.31 a)	<p>What process, including timelines, does Trans Mountain have in place for compensating the following impacts from a spill:</p>	<p>Kinder Morgan Canada (KMC) cannot speculate as to the different conditions under which costs may arise as a result of an emergency, or the amount of time it may take to settle</p>	<p>The Application rightly notes that a spill would result in numerous impacts to economic and human activities, and would impose demands on government agencies. In order to</p>

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
	<ul style="list-style-type: none"> <li>i) Damage to cultural/heritage resources;</li> <li>ii) Environmental damage (habitat and species and impacts)</li> <li>iii) Recreational activities prohibited as a result of a spill;</li> <li>iv) Damage to property (homes, businesses, commercial);</li> <li>v) Impacts to municipal infrastructure;</li> <li>vi) Impacts to agriculture;</li> <li>vii) Impacts to forestry;</li> <li>viii) Impacts to the tourism/recreational industry;</li> <li>ix) Impacts on government resources;</li> <li>x) Loss of public use, such as inability to use, or limitations on the use of parks, beaches and public roads;</li> </ul>	<p>claims, but can confirm it is responsible for all of its legal liabilities.</p> <p>KMC's Emergency Management Program (ERP) [sic] is under review, including sections related to compensation programs. The Application Volume 7, Section 4.8 outlines the process to enhance KMC's existing emergency management programs as they relate to the Trans Mountain Pipeline system to address the needs of the Project. The final programs will be developed in a manner consistent with the National Energy Board's (NEBs) draft conditions related to emergency management.</p>	<p>gain a full appreciation of such impacts, the Province seeks to better understand Trans Mountain's compensation process.</p> <p>Volume 7 of the Application does not provide the requested information.</p> <p>The request does not ask KMC to speculate as to the different conditions under which costs may arise. It simply asks the proponent to describe the process currently <u>in place</u> for providing compensation for the specified types of spill impacts.</p>
1.36 (i), (ii), and (iii)	<p>Please provide details regarding Trans Mountain's plans for monitoring of groundwater quality during operation of the Project. Please include the following details:</p> <ul style="list-style-type: none"> <li>(i) Location of monitoring;</li> <li>(ii) Timing and frequency of monitoring;</li> <li>(iii) Contaminants the presence of which will be monitored;</li> </ul>	<p>Kinder Morgan Canada Inc. (KMC) has established groundwater monitoring programs at selected facilities along the system. In response to question items (i), (ii), (iii), (iv), (v) and (vi), prior to operation of the Project, KMC will assess whether the current groundwater monitoring program is sufficient for the new pipeline and facilities. Depending on the results of the assessment, additional monitoring sites may be added to the groundwater program or the program at existing sites may be expanded to reflect the increased infrastructure at the location. The frequency of the monitoring and sampling events may also be adjusted.</p> <p>Further response to question (v), although not intended to represent baseline data for operational monitoring, the pre-construction water well testing of wells in the vicinity of the pipeline will provide baseline data for future comparison purposes, if needed. Trans Mountain detailed the scope of pre-construction testing of neighbouring water wells in the Groundwater Technical Report 5C-3, Volume 5C, Section</p>	<p>The Province seeks to better understand the potential impacts of the Project on groundwater quality.</p> <p>Paragraphs (i), (ii), and (iii) of the request ask Trans Mountain to provide details with respect to the location, timing and frequency of groundwater quality monitoring, and the relevant contaminants. Neither this response, nor the response to GoC NRCan IR No. 1.04.0a, provides the requested details.</p>

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
		<p>5.1.4. In response to question item (vii), Trans Mountain will investigate and respond to neighbouring water well owner complaints potentially related to pipeline operations, regardless of available pre- or post-construction testing requirements. Prior testing or analysis will simplify the determination of the presence or absence of an impact, but the absence of prior testing will not eliminate the potential for testing in the event of a valid complaint.</p> <p>Please also see the response to GoC NRCan IR No. 1.04.0a.</p>	
1.38 a)	<p>What is the rationale for the 30 metre boundary from the construction right-of-way to assess potential impacts to wells? What criteria did Trans Mountain utilize to arrive at this figure?</p>	<p>A 30 m offset was selected and employed as the core buffer area related to protection of water quantity/water quality in the Pipeline Environmental Protection Plan, Volume 6B of the Facilities Application. This buffer was established as part of basic requirements for a variety of water quantity/water quality mitigation measures during the pipeline construction, including some related to water wells. For example, to eliminate the application of weed control herbicides within 30 m of water wells to ensure no water quality impacts occur to water wells. This same offset was applied to well replacement mitigation measures in Table 7.2.3-2, Volume 5A of the Facilities Application, and Table 4.1-1, of Groundwater Technical Report 5C-3, Volume 5C. Trans Mountain acknowledges that this offset distance should not necessarily govern decisions related to the need for well replacement or other mitigation measures, but the need for replacement should more importantly be based on the verification of the impact being related to pipeline activities, and the severity of the impact. If pipeline construction and operation activities impact water wells (quality or quantity) beyond the 30 m core buffer, Trans Mountain will consider the need for appropriate mitigation.</p>	<p>The request asks Trans Mountain to provide a rationale for selecting 30 m as the appropriate buffer area related to water protection. The response does not explain how that particular figure was arrived at.</p>

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
1.38 d)	If a spill occurred, what steps would Trans Mountain take to determine if wells are affected by the spill? What plans does it currently have in place to remediate wells affected by a spill? Does it intend to enhance or change its plans in this regard if the TMEP is approved? If so, please explain the intended changes to its plans.	Please refer to the responses to GoC NRCan IR No. 1.04.0c and City Burnaby IR No. 1.04.06c.	<p>The response to GoC NRCan IR No. 1.04 does not contain a paragraph c). The remainder of the response to that particular request does not provide the information requested by the Province.</p> <p>While the response to City Burnaby IR No. 1.04.06c provides some high-level information on Trans Mountain's proposed response groundwater impacts, it does not describe the well remediation plans currently in place or any intended changes to such plans.</p>
1.40 a)	Please provide the failure frequency and return period for spills resulting from third party damage for each of: Greater Vancouver, Hope and Kamloops.	As committed to in NEB IR No. 1.81a, Trans Mountain will submit a risk assessment for Line 2 in Q3 of 2014. Detailed risk results will be provided to the Province of BC at that time, and which will include Greater Vancouver, Hope, and Kamloops.	If this risk assessment is not filed before the deadline for the second round of IRs, then the Province and other intervenors will have no opportunity to test it. The Province respectfully requests that the risk assessment be made available for questioning by all parties in a timely manner.
1.40 b)	Is line 1 included in the calculations for question (a)? If not, would failure frequencies double if it were? If not, what would the failure frequency and spill return periods be?	The portions of Line 1 in the regions referenced in Province BC IR No. 1.1.40a are not part of the scope of this Application. As such, the information request is 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. However, in recognition of the interests of the Province of British Columbia, and specifically the provincial government's mandate to uphold the interests of all British Columbians, Trans Mountain commits to meet with the provincial government to further discuss the information request and work with them to provide the relevant information.	<p>The response does not answer the question posed.</p> <p>Further, Trans Mountain asserts that any information concerning Line 1 is not relevant to this review. The Province disagrees. The cumulative risk posed by Line 1 and Line 2 is relevant to this review. Therefore, the calculation of failure frequency and return periods for the Project must be applied to the <u>entire</u> expanded TMPL system, which, as stated in the Application, "will include Line 1, comprised of existing active and inactive pipeline segments that will be reactivated" (A3S1L1, Application Volume 4C, Project Design and Execution – Operations and Maintenance, Section 2.1: Integrated Safety and Loss Management, PDF p.28 of 102).</p> <p>Trans Mountain's offer to provide the relevant information in meeting with the Province is of no assistance in the context of this review process. The Province respectfully</p>

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
			requests that Trans Mountain answer the request on the record so that the evidence filed may be reviewed and evaluated by all parties.
1.41 c)	Will the proponent provide opportunities and funding for First Nations and citizens to participate in such monitoring?	Please refer to the response to NEB IR No. 1.20.	The response to NEB IR No. 1.20 describes the responsibilities of Aboriginal Monitors. It does not provide any information concerning funding, and it does not discuss citizen participation.
1.42	Please provide a table listing all regulatory and voluntary requirements imposed on tankers visiting Westridge Marine Terminal, for a tanker while in Canadian waters. One column should list the requirement, the next should indicate if the requirement is (i) legislated by the federal government, (ii) imposed by a policy made by an agency certified by the federal government, or (iii) a voluntary commitment. Please provide clear linkages to legislation, policy, public commitments, or other reference documentation.	This Information is already provided in Volume 8A — Marine Transportation.	Volume 8A does not provide the requested information. Draft conditions No. 2 and 3 issued by the NEB on April 16, 2014 requires the Project to be operated in accordance with, at a minimum, the standards, policies, mitigation measures, procedures and other information included or referred to in the Application or otherwise committed to during the proceeding. Therefore, the Province requires that those requirements imposed on tankers which are voluntary commitments be clearly identified, so that they may be captured by draft conditions No. 2 and 3.
1.48 a)	Please provide the supporting information, including all relevant data and their sources, for the frequencies and return periods set out in reference (i).	The frequencies and return periods are based on the MARCS modelling. The modelling is based on the number of vessel movements, the number of vessel crossings, meeting and overtaking that are derived from the AIS data, as explained in Sections 2 and 5 and Appendix 1 of reference (i). Also refer to Volume 8C - TERMPOL 3.13.	The request asks Trans Mountain to provide the underlying data used in the calculation of frequencies and return periods, so that the assertions made in the report may be evaluated. As TERMPOL 3.13 concerns berth procedures and provisions and does not provide the requested data, the Province assumes that Trans Mountain intended to refer to TERMPOL 3.15. Referring the Province back to the material that formed the basis for its request is of no assistance.
1.50 a)	Are the capabilities provided by VTS identical around the world? Please provide a comparison of the VTS capabilities	MCTS is recognized by the International Maritime Organization (IMO) as a VTS meeting the regulations	The Application relies on the risk reduction effect of Coastal Vessel Traffic Service (VTS) and cites a number of

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
	provided by the Canadian Coast Guard with the vessel traffic services provided in the jurisdictions referred to in reference i).	criteria. To be recognized by the IMO as a Vessel traffic services (VTS), the service must "contribute to safety of life at sea, safety and efficiency of navigation and protection of the marine environment, adjacent shore areas, work sites and offshore installations from possible adverse effects of maritime traffic. Contracting Governments undertake to arrange for the establishment of VTS where, in their opinion, the volume of traffic or the degree of risk justifies such services". (SOLAS chapter V, Safety of Navigation, Regulation 12).	worldwide studies in support of the assertion that VTS will reduce the frequency of events. The Application does not state whether the vessel traffic services in the cited jurisdictions are comparable to the services provided by the Canadian Coast Guard. If Trans Mountain relies on worldwide data in its assertions, then it must explain why such data is relevant to our jurisdiction.  The request asks Trans Mountain to compare the VTS capabilities of the Canadian Coast Guard with those of the jurisdictions referred to in reference i). The response does not provide such a comparison.
1.52	Please provide the supporting information, including all relevant data and their sources, for the frequencies and return periods referred to above.	<p>The methodology of estimating the collision and grounding risk is described in Appendix 1 of the Termpol 3.15 report. The effect of risk mitigating measures is discussed in Appendix 4 of the Termpol 3.15 report. Some of the sources for the supporting information of risk reducing measures are provided below:</p> <ul style="list-style-type: none"> <li>· CEC (1988), "COST-301: Shore-based Marine Navigation Aid Systems", Report EUR-11304 EN, Commission of the European Communities.</li> <li>· DNV (1998), "Demonstration of Risk Analysis Technique for Ship Transportation in European Waters", Safety of Shipping in Coastal Waters (SAFECO), Det Norske Veritas Project 98-2021, July 1998.</li> <li>· DNV (1999), "Risk Assessment of Pollution from Oil and Chemical Spills in Australian Ports and Waters", Det Norske Veritas Project 9330-3972, December 1999.</li> <li>· DNV (2011), "Assessment of the Risk of Pollution from Marine Oil Spills in Australian Ports and Waters", Det Norske Veritas Project PP002916, December 2011.</li> </ul>	<p>Termpol 3.15 makes a number of assertions risk reduction through the implementation of risk control measures. The request asks Trans Mountain to provide the underlying data used in the calculation of frequencies and return periods, so that the assertions made in the report may be evaluated.</p> <p>Neither the appendices the Province is referred to, nor the sources listed in the response, provide the requested data.</p>

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
		<ul style="list-style-type: none"> <li>· Drager, K.H., Kristiansen, S., Karlsen, J.E. &amp; Wienke, P.M. (1981), "Cause Relationships of Collisions and Groundings - Conclusions of Statistical Analysis", Norwegian Maritime Research No3.</li> <li>· IMO (2006), "FSA Study on ECDIS/ENCs", MSC/81/24/5, International Maritime Organization, February 2006.</li> <li>· IMO (2007), "Study on the Effect of ENC Coverage on ECDIS Risk Reduction", NAV53/Inf3, International Maritime Organization, April 2007.</li> <li>· Knapp, S., Bijwaard, G. &amp; Heij, C. (2011), "Estimated Incident Cost Savings in Shipping due to Inspections", Incident Analysis and Prevention, vol 43, no 4, July 2011.</li> <li>· Larsen, O.L. (1993), "Ship Collision with Bridges", International Association for Bridge and Structural Engineering, Zurich.</li> <li>· Lewison, G.R.G. (1980), "The Estimation of Collision Risk for Marine Traffic in UK Waters", Journal of Navigation, Sept 1980 (also in NMI Report R91).</li> <li>· Spencer, M.B, Robertson, K.A. &amp; Folkard, S. (2006), "The Development of a Fatigue/Risk Index for Shiftworkers", Research Report 446, Health &amp; Safety Executive, 2006.</li> <li>· Spouge, J.R. (2003), "The Safety of General Cargo Ships", International Journal of Maritime Engineering, December 2003.</li> <li>· SSPA (2012), "Summary Report on Evaluating VTS and Pilotage as Risk Reduction Measures", Efficiency Sea project, document W-WP6-5-04, January 2012.</li> </ul>	
1.55	Would the proponent accept certificate conditions making the Project conditional upon the implementation of the	Trans Mountain has identified and recommended "additional mitigation measures in compliance with, or exceeding	The List of Issues the NEB has set for this review includes "the terms and conditions to be included in any approval the

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
	measures referred to above?	regulatory requirements, proposed by Trans Mountain to further facilitate marine shipping safety" as required by the National Energy Board's Letter, "Filing Requirements Related to the Potential Environmental and Socio-Economic Effects of Increased Marine Shipping Activities, Trans Mountain Expansion Project" dated September 10, 2013. It would be up to the National Energy Board (NEB) to consider whether any of these should be a certificate condition of the project.	Board may issue". The Province is aware that the NEB will ultimately decide which certificate conditions to impose. The request seeks to understand whether, if the condition described in the request was proposed by the Province, Trans Mountain would agree to such a condition being included in the NEB's conditions.
1.63 c)	Would the proponent accept a certificate condition requiring all proposed improvements in Table 5.5.3 to be in place before the start of Project operations?	Please refer to the response to Province BC IR No. 1.1.63b. The Application is under review by the National Energy Board (NEB) and it will be determined by the NEB as to which elements of Table 5.3.3, if any, should be a certificate condition for the project.	The List of Issues the NEB has set for this review includes "the terms and conditions to be included in any approval the Board may issue". The Province is aware that the NEB will ultimately decide which certificate conditions to impose. The request seeks to understand whether, if the condition described in the request was proposed by the Province, Trans Mountain would agree to such a condition being included in the NEB's conditions.
1.63 e)	Please provide a copy of WCMRC's current Oil Spill Response Plan (OSRP) referred to in the row entitled "Response Plan Contents" in Table 5.5.3.	The referenced plan has been prepared by Western Canada Marine Response Corporation (WCMRC), not Trans Mountain. This Plan serves as part of the Response Organizations' certification requirement with Transport Canada. Accordingly, Trans Mountain cannot supply that document directly. Trans Mountain encourages the Province of British Columbia to contact WCMRC to obtain a copy of that plan.	Trans Mountain relies on WCMRC's response capabilities in support of its application and makes numerous references to WCMRC's OSRP throughout the Application. It is clear that Trans Mountain has access to WCMRC's OSRP. In order for the NEB, the Province, and other intervenors to assess WCMRC's ability to respond as claimed in the Application, Trans Mountain ought to provide evidence to substantiate the asserted response capacity. The Province respectfully requests that Trans Mountain file a copy of the plan on the record, so that it may be reviewed and evaluated by the NEB and all parties to this proceeding.
1.64 b)	How was the amount of capacity in excess of what is required determined?	The federal planning standards cited in Province BC IR No. 1.1.64a dictate the core response capacity necessary to	The request asks Trans Mountain to clarify how the amount of capacity <u>exceeding</u> the required response capacity was

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		receive the 10,000 tonne certification.	determined. The response does not provide such clarification.
1.67 a)	Please provide copies of the mutual aid agreements WCMRC has, to date, entered into.	The referenced mutual aid agreements are held by Western Canada Marine Response Corporation (WCMRC) and not Trans Mountain. Accordingly, Trans Mountain cannot supply those documents. Trans Mountain encourages the Province of British Columbia to contact WCMRC to obtain a copy of these agreements	<p>Trans Mountain relies on the availability of mutual aid in support of its application and makes numerous references throughout the Application to mutual aid and “cascading resources”. The response offers no explanation for the assertion that the documents cannot be supplied.</p> <p>Trans Mountain ought to provide evidence substantiating the claims made in the Application, so that the NEB, the Province, and other intervenors may evaluate the availability and effectiveness of mutual aid. It is not incumbent on the Province or any other intervenor to obtain information which is relied upon by the proponent in its application directly from third parties. The Province respectfully requests that Trans Mountain file a copy of the relevant mutual aid agreements on the record, so that it may be reviewed and evaluated by the NEB and all parties to this proceeding.</p>
1.67 e)	Please provide a list of equipment that could be "cascaded" to the British Columbia coast from other locations in Canada. The response should include the location, type and amount of equipment that has been verified as releasable to British Columbia, and the time required for notification/request, preparation and transit time to the possible spill base locations envisioned by the proponent.	Any decision to request additional equipment to supplement Western Canada Marine Response Corporation's (WCMRC's) future capacity, should it be deemed necessary, would be taken only as part of a decision made by Unified Command under Incident Command System (ICS) and in response to an accident — determined by Det Norske Veritas (DNV) not to be a credible event. Trans Mountain believes that its Application contains appropriate and credible information to allow informed decision making, as such, the information requested will not be provided.	<p>Trans Mountain makes reference in Volume 8C to the availability of equipment from other areas which could be “cascaded in” in response to a spill. For the purposes of its assessment of Trans Mountain's ability to respond to a large spill, the Province requires further detail with respect to the equipment that could be available.</p> <p>The response amounts to a refusal to provide the requested information. If the Province was of the view that the Application contains sufficient information, it would not have requested additional information.</p>
1.67 f)	Please provide information on the types of equipment that cannot be "cascaded" to the British Columbia coast due to transport limitations (e.g. skimmer vessels from the east	Please refer to the response to Province BC IR No. 1.1.67e.	Trans Mountain makes reference in Volume 8C to the availability of equipment from other areas which could be “cascaded in” in response to a spill. For the purposes of its

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	coast of Canada).		<p>assessment of Trans Mountain's ability to respond to a large spill, the Province requires further detail with respect to the practicability of transporting equipment from other jurisdictions to the British Columbia Coast.</p> <p>In referring the Province back to the previous response, this response also amounts to a refusal to provide the requested information. If the Province was of the view that the Application contains sufficient information to inform its assessment of the ability to respond to a spill into the marine environment, it would not have requested additional information.</p>
1.67 g)	Please provide information on the measures already in place to make spill response equipment available from other jurisdictions.	Trans Mountain does not have this information. Please refer to the response to Province BC IR No. 1.1.67a.	<p>No explanation is given in support of the assertion that Trans Mountain does not have the information requested.</p> <p>Trans Mountain relies on the availability of mutual aid in support of its application and makes numerous references throughout the Application to mutual aid and "cascading resources". Trans Mountain ought to provide evidence substantiating the claims made in the Application, so that the NEB, the Province, and other intervenors may evaluate the availability and effectiveness of mutual aid.</p>
1.67 h)	Please outline any approvals that would be required from the federal government, provincial governments, spill response organizations, and industries that rely on the availability of spill response equipment for their operations.	Please refer to the responses to Province BC IR No.1.1.67b and 1.1.67e.	Neither the response to Province BC IR No. 1.67 b), nor the response to Province BC IR No. 1.67 e), provides the requested information.
1.67 i)	<p>Please describe the following:</p> <ul style="list-style-type: none"> <li>• the equipment and resources that the United States, France and Denmark would be able to provide in response to a spill in British Columbia waters;</li> <li>• the estimated length of time that would be required to (i)</li> </ul>	Please refer to the responses to Province BC IR No. 1.1.67e and 1.1.67h.	None of the responses to Province BC IR No. 1.67 e), Province BC IR No. 1.67 h), or Province BC IR No. 1.67 b), to which the Province is referred in the response to Province BC IR No. 1.67 h), provide the requested information.

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
	<p>request the equipment or resources; (ii) receive approvals for their release from the source government; (iii) prepare and secure them for transport; (iv) transport them from the source locations to the possible spill base locations envisioned by the proponent;</p> <ul style="list-style-type: none"> <li>• all possible impediments to the release of equipment or resources from these jurisdictions, including state, regional, local government or industry refusal.</li> </ul>		
1.69 a)	<p>In light of reference (ii), please describe the response capacity of the Canadian Coast Guard (CCG) so far as it would form part of the spill response plans for Project-related tanker traffic</p>	<p>The response capacity of the Canadian Coast Guard cannot be supplied by Trans Mountain. Accordingly, Trans Mountain encourages the Province of British Columbia to contact Canadian Coast Guard directly to obtain that information.</p>	<p>The response offers no explanation for the claim that the response capacity of the Canadian Coast Guard cannot be supplied.</p> <p>Trans Mountain relies on the response capacity of the Canadian Coast Guard in support of its application and makes numerous references throughout the Application to such capacity. Trans Mountain ought to provide evidence substantiating the claims made in the Application, so that the NEB, the Province, and other intervenors may evaluate the response capacity of the Canadian Coast Guard for Project-related spills.</p> <p>It is not incumbent on the Province or any other intervenor to obtain information which is relied upon by the proponent in its application directly from third parties.</p>
1.69 c)	<p>Please provide a table outlining the equipment available for Project-related incidents at all WCMRC and CCG equipment depots and caches, as well as the number of personnel and types of vessels available to use and transport it.</p>	<p>The proposed equipment and base enhancements recommended to support the Trans Mountain Expansion Project can be found in: A3S5I9, 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.</p> <p>Information on the response resources of the Canadian Coast Guard cannot be supplied by Trans Mountain. Accordingly,</p>	<p>Volume 8C, TERMPOL Reports, TR 8C-12 S12 provides a partial response only. It does not set out any personnel numbers.</p> <p>The response offers no explanation for the claim that the response capacity of the Canadian Coast Guard cannot be supplied.</p> <p>Trans Mountain relies on the response capacity of the Canadian Coast Guard in support of its application and</p>

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
		<p>Trans Mountain encourages the Province of British Columbia to contact Canadian Coast Guard directly to obtain that information.</p>	<p>makes numerous references throughout the Application to such capacity. Trans Mountain ought to provide evidence substantiating the claims made in the Application, so that the NEB, the Province, and other intervenors may evaluate the response capacity of the Canadian Coast Guard for Project-related spills.</p> <p>It is not incumbent on the Province or any other intervenor to obtain information which is relied upon by the proponent in its application directly from third parties.</p>
1.69 e)	<p>Please outline the expected time required to notify equipment cache operators and to prepare equipment for transport (including any logistical arrangements such as charting vessels for transport).</p>	<p>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. A3S5I9, 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 detail the comparison between current the [<i>sic</i>] response times and the future response times that have been proposed to support the Project. As part of their normal operating procedures, Western Canada Marine Response Corporation has standing agreements with contractors and vessels of opportunity to minimize activation times. Efficient deployment and operation of equipment is facilitated by additional support from training and operations to ensure maximum effectiveness once on site.</p>	<p>As a prompt arrival on the scene is critical to the effectiveness of spill response, the time required to notify equipment cache operators and to prepare equipment for transport is a relevant consideration in the Province's overall assessment of Trans Mountain's ability to effectively respond to a spill.</p> <p>The response does not set out the expected time required to notify equipment cache operators and to prepare equipment for transport.</p>
1.72 a)	<p>Please provide a full account of all personnel available to respond to a spill, outlining: (i) their location; (ii) level of certification; (iii) equipment training; and (iv) whether they are a dedicated WCMRC resource or a supplemental contracted resource that could be otherwise employed and unavailable at the time of an incident.</p>	<p>The information request regarding Western Canada Marine Response Corporation's (WCMRC's) existing operation is not relevant to one of more of the issues identified in the National Energy Board's List of Issues for the Trans Mountain Expansion Project. Accordingly, Trans Mountain encourages the Province of British Columbia to contact</p>	<p>Emergency response planning, including response planning for Project-related spills into the marine environment, is squarely within the scope of the issues identified by the NEB for this review process. The Province seeks details with respect to the availability, location, certification and training of response personnel, in order to inform its assessment of</p>

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
		WCMRC to obtain a more information about their existing capabilities.	<p>the overall ability to respond to a Project-related marine spill. This request is undeniably relevant to this review process.</p> <p>Further, Trans Mountain relies on the response capacity of WCMRC and other resources in support of its application and makes numerous references throughout the Application to such capacity. It is not open to Trans Mountain to argue that questions seeking to probe the extent of such capacity are not relevant; neither is it incumbent on the Province or any other intervenor to obtain information which is relied upon by the proponent in its application directly from third parties. The Province respectfully requests that Trans Mountain provide evidence substantiating the claims made in the Application, so that the NEB, the Province, and other intervenors may evaluate the response capacity available for Project-related spills.</p>
1.72 b)	Please provide copies of the contracts in place with fishers as part of the Fishers Oil Spill Emergency Team.	These contracts are in place between Western Canada Marine Response Corporation (WCMRC) and their Fisherman Oil Spill Emergency Team (FOSET) members, not Trans Mountain. Accordingly, Trans Mountain cannot supply that document directly. Trans Mountain encourages the Province of British Columbia to contact WCMRC to obtain a copy of this agreement.	<p>The response offers no credible explanation for the assertion that Trans Mountain cannot supply copies of the contracts between WCMRC and FOSET members.</p> <p>Trans Mountain relies on the availability of FOSET members in support of its application and makes numerous references throughout the Application to such availability. Therefore, Trans Mountain ought to provide evidence substantiating the claims made in the Application, so that the NEB, the Province, and other intervenors may evaluate the response capacity available for Project-related spills.</p> <p>It is not incumbent on the Province or any other intervenor to obtain information which is relied upon by the proponent in its application directly from third parties.</p>
1.73 a)	Have the methodology and results of the study referred to in	The individuals (and their organizations) that reviewed and	The response does not indicate whether the methodology and

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	reference (i) been scientifically peer reviewed by experts in oil fate and behaviour?	provided feedback on the study approach, design, and drafts of the report are listed in the document's Acknowledgements section (refer to the Application, Volume 8C, TR8C-12, S7). Several of the individuals cited have an established career in oil fate and behaviour studies.	results of the study have been scientifically peer reviewed.
1.73 o)	Please outline all response technologies and techniques and existing capacity to address submerged oil following a spill from a tanker associated with the Project.	Please refer to the response to Katzie FN IR No. 1.11b.	While the response to Katzie FN IR No. 1.11b provides a discussion of the methods for recovering sunken oil, it does not address the existing capacity to employ such methods.
1.73 p)	Have the technologies and techniques listed above been tested and proven to work? If yes, please describe how they have been tested and the conclusions drawn from the results of those tests.	Please refer to the response to Katzie FN IR No. 1.11b.	The response to Katzie FN IR No. 1.11b does not indicate whether the methods referred to therein have been tested and proven to work, nor does it describe how they have been tested and what conclusions have been reached.
1.73 t) (v), (vi) and (vii)	Please provide a detailed report outlining WCMRC's capability to respond to a diluted bitumen spill up to the volume of the credible worst case scenario outlined in this application. The report should include, but not be limited to: ... (v) crew boats, transport boats and others needed to support the on-water operations; (vi) for each of the possible spill locations listed in reference iv), all Incident Command Post (ICP) locations that would be capable of housing a multi-agency, unified command response and providing all the logistical supports required (communications and internet links, food and accommodation for ICP staff nearby); and (vii) the numbers of trained dedicated responders, ICP staff, and logistical support personnel (medical, housing, food, transport, waste transport, etc.).	... (v) Oil spill response operates within the framework of the Incident Command System (ICS). The Logistics Section of ICS is tasked with procuring resources such as crew boats, transport boats and others needed to support the on-water operations. Additionally, WCMRC maintains a third-party contractor roster, a vessel-of-opportunity roster, and a Fishermen's Oil Spill Emergency Team (FOSET) program – all of which are able to provide such resources. (vi) Trans Mountain does not keep information regarding the logistical plans of WCMRC. Accordingly, Trans Mountain encourages the Province of BC to contact WCMRC directly to obtain that information. (vii) Trans Mountain does not keep information regarding the logistical and personnel plans of WCMRC. Accordingly, Trans Mountain encourages the Province of BC to contact WCMRC directly to obtain that information.	The response does not provide the requested detail with respect to the availability of crew boats, transport boats and others needed to support on-water operations. Trans Mountain relies on the response capacity of WCMRC and in support of its application and makes numerous references throughout the Application to such capacity. Trans Mountain ought to provide evidence substantiating the claims made in the Application, so that the NEB, the Province, and other intervenors may evaluate the response capacity available for Project-related spills. It is not incumbent on the Province or any other intervenor to obtain information which is relied upon by the proponent in its application directly from third parties.

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
1.74 b)	Please provide a summary of research completed to date on the use and effectiveness of dispersants and shoreline cleaning agents during the response to the 2010 Deep Water Horizon oil spill and the 2010 Kalamazoo River oil spill.	The information request is not relevant to one of more of the issues identified in the National Energy Board's List of Issues for the Trans Mountain Expansion Project. However, in recognition of the interests of the Province of British Columbia, and specifically the provincial government's mandate to uphold the interests of all British Columbians, Trans Mountain commits to meet with the provincial government to further discuss the information request and work with them to provide the relevant information.	<p>The Province seeks to evaluate the effectiveness of dispersants and shoreline cleaning agents, which, as a component of emergency response planning, is squarely within the scope of the issues identified by the NEB. The conclusions drawn through research on the effectiveness of such agents during the response to the 2010 and 2013 events would be of significant assistance in the evaluation. Further, in its response to Province BC IR No. 1.74 c) (v), Trans Mountain itself expressly refers to the Deep Water Horizon incident to substantiate its claim that WCMRC's mutual aid partners have "extensive experience around the world using dispersants". It is thus perfectly reasonable for the Province to probe the effectiveness of the use of dispersants during that incident.</p> <p>Trans Mountain's offer to provide the relevant information in meeting with the Province is of no assistance in the context of this review process. The Province respectfully requests that Trans Mountain answer the request on the record so that the evidence filed may be reviewed and evaluated by all parties.</p>
1.74 c)	<p>What is the current capability of WCMRC and other responders certified to operate in British Columbia to use chemical dispersants? Please include a discussion of the following:</p> <p>(i) the type and location of available dispersants and shoreline cleaning agents;</p> <p>(ii) all protocols and procedures for approval, delivery and monitoring of dispersant use;</p> <p>(iii) the approved dispersant delivery methods (e.g. equipped aircraft or vessels) currently available in British</p>	<p>This information request will be responded to chronologically below.</p> <p>(i) Western Canada Marine Response Corporation (WCMRC) maintains an inventory of shoreline cleaning agent (Corexit 9580) and the associated application equipment at each of its response bases (Duncan, Prince Rupert and Burnaby). Currently WCMRC does not maintain an inventory of dispersant or associated equipment however it has in place mutual aid agreements with other spill response organizations with significant capabilities. WCMRC also participates on the Global Response Network dispersant</p>	<p>The Application refers to the use of chemical dispersants as a potential spill response method. In its overall evaluation of the ability to respond to Project-related spills, the Province seeks to better understand the current capability of responders to use dispersants.</p> <p>While the response provides a fairly detailed discussion of the subjects set out in paragraphs (i) to (viii), it does not discuss the current capability of WCMRC and other responders to use chemical dispersants.</p>

IR # <sup>1</sup>	IR Wording	Trans Mountain's response to IR	Intervenor's explanation for claiming IR response to be inadequate
	<p>Columbia;</p> <p>(iv) dispersant use monitoring capability;</p> <p>(v) the training, experience and certification of the personnel required for the deployment, delivery and monitoring of dispersants;</p> <p>(vi) the estimated time required to receive all required regulatory and First Nations approvals;</p> <p>(vii) the estimated time required to notify and activate all required responders and support personnel; and</p> <p>(viii) the estimated time required to get all required operational, support and monitoring equipment in place to commence operations.</p>	<p>operating team to ensure ready access to subject matter experts, dispersant inventory and dispersant equipment that can be activated under mutual aid agreements.</p> <p>(ii) Recently Transport Canada has recommended that dispersant use in Canada be examined; as such, Western Canada Marine Response Corporation (WCMRC) is already evaluating required protocols and procedures for approval, delivery and monitoring of dispersant use.</p> <p>Under the current regime there are no approved pre-established protocols or procedures for the use of dispersants. If an incident presented suitable conditions to apply dispersants WCMRC would make a formal request through Unified Command to the Canadian Coast Guard. The Canadian Coast Guard would then work with the ICS Science Table on a "go" or "no go" recommendation and the areas approved to be treated.</p> <p>WCMRCs mutual aid partners would support an approved aerial dispersant program by using proven equipment, application techniques and monitoring procedures.</p> <p>(iii) Currently there are no dispersants or application equipment in British Columbia.</p> <p>(iv) The aerial surveillance teams already in place in ICS would perform dispersant monitoring in cooperation with the dispersant teams. It is expected this monitoring program will include participation of NASP (National Aerial Surveillance Program) who has an aircraft based in Vancouver International Airport (VYR).</p> <p>(v) Western Canada Marine Response Corporation's (WCMRC's) mutual aid partners have extensive experience around the world using dispersants including an extended program in 2010 while responding to the Deep Water</p>	

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		<p>Horizon incident in the Gulf of Mexico.</p> <p>(vi) For dispersants to be effective during an incident response, it will be critical for the government of Canada to have pre-established protocols and procedures for their use to support the Unified Command's decision to deploy them.</p> <p>(vii) Please refer to Section 12A3S5I9, 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, Section 3.8 for a detailed discussion of response times.</p> <p>(vii) Please refer to Section 12A3S5I9, 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, Section 3.8 for a detailed discussion of response times.</p>	
1.74 j)	Please confirm whether or not there is dedicated (i.e. directly employed or contracted resources on retainer for immediate response) capacity for shoreline cleanup.	The Responsible Party (RP) works within the Incident Command System and takes direction from the Unified Command (UC). Typically the UC will direct WCMRC to manage the shoreline workforce on behalf of the RP. Although Western Canada Marine Response Corporation maintains a network of third-party contractors, some shoreline workforce will be procured through the Logistics Section of the UC. Work assignments for the shoreline workforce are issued in the daily Incident Action Plan (IAP); work assignments will include shoreline protection strategies and treatment recommendations developed by SCAT and the Environmental Unit.	The availability of responders is critical to the Province's overall assessment of Trans Mountain's ability to effectively respond to a spill. The request asks Trans Mountain to confirm whether there is <u>dedicated (directly employed or contracted resources on retainer for immediate response)</u> capacity for shoreline cleanup. The response does not answer the question.
1.75 c)	Please explain why the simulated response described in reference i) would result in the recovery of far greater amounts of oil than the "10-15% and often considerably	The understanding of the behaviour of the slick was critical in assessing the mitigation strategy: The approach described in reference (i) shows the importance of being able to	The results of Arachne Reef Spill Simulation discussed in the Application indicate an oil recovery rate of 44.5%. This is inconsistent with the finding by the International Tanker

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	less" quoted in reference (ii).	respond quickly to a spill using spill response equipment suited to the local response needs. Collaboration between operations and modelling sciences allowed evaluation and improvement of the spill response plan and was used towards developing the enhanced oil spill response regime proposed in Volume 8A, Section 5.5.2. Please also see Volume 8C, S13-Trans Mountain Expansion Project Oil Spill Response Simulation Study, Arachnee Reef and Westridge Marine Terminal for more information.	Owners Pollution Federation that "containment and recovery at sea rarely results in the removal of far greater amounts of oil than 10-15% and often considerably less" (see preamble). The response does not explain why the simulated response would result in the recovery of far greater amounts of oil than 10-15%.
1.75 d)	Please provide a table of tanker spills over the last 20 years, including for each instance the volume of oil spilled and the actual volume of oil recovered at sea.	Trans Mountain believes that its Application contains appropriate and credible information to allow 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" dated 10 September, 2013.	The Application does not contain sufficient information in order for the NEB, the Province, and other intervenors to assess the ability to recover oil spilled at sea. If it did, the Province would not have requested additional information.
1.76	Please provide a list of joint response planning and response exercises involving the Canadian and US Coast Guards, including the following: (1) agencies involved, (2) simulations conducted, (3) lessons learnt and (4) outcome reports. Please outline for each exercise the dates for which it was scheduled and confirm that it was actually held. If not, please explain why.	Kindly approach the Canadian and US Coast Guards for this information.	Volume 8A of the Application makes explicit reference to "joint planning and response exercises" being held on an annual basis by the Canadian and US Coast Guards. Trans Mountain relies on the response capability of the Canadian Coast Guard and on its collaboration with the US Coast Guard in support of its application. Trans Mountain, as the applicant, ought to provide the evidence required to substantiate the assertions made in the Application. It is not incumbent on the Province or any other intervenor to obtain information which is relied upon by the proponent in its application directly from third parties.
1.77 a)	Please list all the rules and regulations set by PMV that relate to spill prevention, preparedness, response, and environmental recovery following a spill.	Please refer to Port Metro Vancouver's (PMV's) Harbour Operations Manual for rules and regulations pertaining to PMV. Further information should be requested from PMV	The rules and regulations set by PMV in relation to spill prevention, preparedness, response and environmental recovery are relevant to emergency response planning. As a result, these rules and regulations ought to be put on the

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		directly.	record for review and evaluation by all parties. It is not incumbent on the Province or any other intervenor to obtain information which is relied upon by the proponent in its application directly from third parties.
1.78 c)	Will the proponent provide its own firefighting resources to fill any existing gaps in firefighting capabilities?	c) Please refer to the response to Province BC IR No. 1.1.78a.	While the response to Province BC IR No. 1.78 a) offers a detailed description of Trans Mountain's discussions and collaborative planning efforts with the City of Vancouver and municipal fire departments, it does not answer the question posed in IR No. 1.78 c).