



**Administrative Monetary Penalty
Sanction administrative pécuniaire**

Notice of Violation / Procès-verbal

REFERENCE NUMBER / N° DE RÉFÉRENCE:

AMP-003-2022

Information for Pipeline Company/Third Party/Individuals

Information pour la société pipelinrière / une tierce partie / un particulier:

Name / Nom:	Trans Mountain Pipeline ULC	TOTAL PENALTY AMOUNT / MONTANT TOTAL DES PÉNALITÉS:
Contact / Contactez:	Dawn Farrell	
Title / Titre:	President and Chief Executive Officer	Date of Notice / Date du Procès :
Address / Adresse:	Suite 2700, 300 – 5 th Avenue SW	October 27, 2022
City / Ville:	Calgary	Regulatory Instrument # / N° de l'instrument réglementaire:
Province / State / Etat:	Alberta	
Telephone / Téléphone:	[REDACTED]	
Email / Courriel:	[REDACTED]@transmountain.com compliance@transmountain.com	

On / Le October 27, 2020 (date violation was detected / date la violation avait été constatée)

Trans Mountain Pipeline ULC

was observed to be in violation of a Canada Energy Regulator regulatory requirement. This violation is subject to an administrative monetary penalty, as outlined below.

a commis une violation aux exigences réglementaire de la Régie de L'énergie du Canada, sujet à la sanction administrative pécuniaire ci-dessous.

Section One – Violation Details / Renseignements sur la violation

<input checked="" type="checkbox"/> Single-day violation / Violation d'un jour Date of Violation / Date de la violation: October 27, 2020		
<input type="checkbox"/> Multi-day Violation/ Violation multi-journée: N/A		
Total Number of Days / Nombre total de jours: 1	Has compliance been achieved? La situation est-elle rétablie?	<input type="checkbox"/> Yes / Oui <input type="checkbox"/> No / Non <input checked="" type="checkbox"/> N/A If no, a subsequent NOV may be issued. Si non, un autre Procès verbal de violation pourrait être envoyé
Location of Violation / Lieu de la violation:	Trans Mountain Expansion Project: Spread 1	
Short Form Description of Violation / Description abrégée de la violation Failure to implement management system process as prescribed and comply with Condition 2 of Certificate of Public Convenience and Necessity OC-065 with respect to the construction of the Trans Mountain Expansion Project.		
Act or Regulation/Section: Canadian Energy Regulator Onshore Pipeline Regulations (OPR), paragraph 6.5(1)(c)		

- Contravention of an Order or decision made under the Act (ss. 2(2) of the AMP Regulations) / Dérogation à une ordonnance ou à une décision rendue sous le régime de la Loi (paragraphe 2(2) de Règlement sur les sanctions administratives pécuniaires)
- Failure to comply with a term or condition of any certificate, licence, permit, leave or exemption granted under the Act (ss. 2(3) of the AMP Regulations) / Manquement à une condition d'un certificat, d'une licence, d'un permis, d'une autorisation ou d'une exemption accordé sous le régime de la Loi (paragraphe 2(3) du Règlement sur les sanctions administratives pécuniaires)

Section Two – Relevant Facts / Faits saillants

Briefly describe reasonable grounds to believe a violation has occurred / Décrire brièvement les motifs raisonnables de croire qu'une violation a été commise.

Executive Summary:

Trans Mountain Pipeline ULC (**Trans Mountain**) is regulated by the Canada Energy Regulator (**CER**) under, among other things, the *Canadian Energy Regulator Act (CER Act)*, associated regulations including the *Canadian Energy Regulator Onshore Pipeline Regulations (OPR)* and the *Administrative Monetary Penalty Regulations (Canadian Energy Regulator) (AMP Regulations)*, Certificate of Public Convenience and Necessity OC-065 (**OC-065**), and various orders, with respect to the construction and operation of the Trans Mountain Expansion Project (**TMEP**) between Edmonton, AB, and Burnaby, BC.

Somerville Aecon Energy Group (**SAEG**) was a General Construction Contractor engaged in construction on TMEP. SAEG commenced work on Spread 1 on December 2, 2019, and was terminated from the spread on December 15, 2020.

On October 27, 2020, [REDACTED], a SAEG employee, was fatally injured while disassembling a Groundworks high arch trench box at TMEP Shoefly 38A of Spread 1 in the vicinity of Edmonton, AB. One of the critical factors that led to the fatality was that the SAEG labour crew (including a foreman, a straw, 3 labourers and a side-boom operator) incorrectly disassembled the trench box by not following manufacturer's instructions.

On October 28, 2020, Alberta Occupational Health and Safety (**AB OHS**) issued order OHS-225701-WSP-01-CD-01A to SAEG. While AB OHS is the provincial regulatory body that is assessing the conduct of SAEG with respect to the fatality, the CER is focused on Trans Mountain's compliance with its regulatory requirements, including those contained in the OPR and OC-065. As part of the CER's regulatory compliance activities, CER [Inspection Officer Order RRW-001-2020](#) was issued on October 30, 2020.

On the date of the fatality, Trans Mountain had a management system process in place to identify and analyze hazards and potential hazards, including those informed by, and contained in, the following documents:

- *ISLMS 3.1 – Hazard and Risk Management Standard (ISLMS HRM Standard)*;
- *ISLMS 3.4 – Hazard and Risk Guidelines (ISLMS HR Guidelines)*;
- TMEP Health and Safety Management Plan (**HSMP**);
- a *Unified Hazard and Risk Management Procedure (UHRMP)*;
- a *Unified Hazard Risk Register (UHRR)*; and
- Exhibit C – Owner's Requirements, Attachment C-12 – Contractor Hazard Risk Register (**Owner Contractual Requirements**).

Paragraph 6.5(1)(c) of the OPR required that Trans Mountain implement this management system process. Implementation involved both putting into action the requirements of the management system process and ensuring that the actions have been conducted appropriately in a manner consistent with the OPR's requirement that management systems be explicit, comprehensive and proactive.

Trans Mountain's management system process with respect to identifying and analyzing all hazards and potential hazards required Trans Mountain to confirm that SAEG had a Trans Mountain-approved Contractor Hazard and Risk Management Procedure (**CHRMP**) in place to, among other things, ensure effective procedures and assessment systems are established and implemented to appropriately identify risks and implement control methods to mitigate them.

The management system process also required Trans Mountain to ensure, through various quality control and quality assurance activities, that SAEG kept in place a Contractor Hazard and Risk Register (**CHRR**) that identified all hazards and potential hazards with respect to SAEG's work on Spread 1, including those identified from Job Hazard Assessments

(JHAs). JHAs were documents that provided general task-specific hazard identification and mitigation measures that were to be reviewed and communicated by field-level supervisors to individual crews. They were to be completed prior to start of non-routine, high risk tasks or in the absence of written work procedures.

On the date of the fatality, SAEG had developed a Spread 1 CHRMP. However, Trans Mountain failed to ensure that it was approved as required by its management system process, including requirements contained in the Owner Contractual Requirements. **Trans Mountain never approved the CHRMP before SAEG's contract was terminated on December 15, 2020, and SAEG was removed from Spread 1 of TMEP.**

On this basis, there are reasonable grounds to believe that Trans Mountain failed to implement its management system process to identify and analyze all hazards and potential hazards on the date of the fatality through ensuring that an approved Spread 1 CHRMP was in place. There are also reasonable grounds to believe that Trans Mountain failed to comply with Condition 2 of OC-065, through failing to implement its commitment filed on the record of the OH-001-2014 proceeding to "comply with all health, safety, security and environmental laws, rules and regulations" – in this case the requirement to take all reasonable care to ensure the safety and security of persons, including the SAEG workers who were disassembling the trench box, under section 94 of the CER Act. Failure to comply with a condition of a certificate is a designated violation under subsection 2(3) of the AMP Regulations.

On the date of the fatality, Trans Mountain also failed to ensure that SAEG's CHRR and its own Unified Hazard Risk Register (UHRR) included hazards identified as sourced through Spread 1 JHAs. On that date, **none of the hazards contained in SAEG's Spread 1 CHRR and in the UHRR relating to Spread 1 are indicated as being identified from JHAs** despite Trans Mountain's management system process requirement that JHAs be used as sources for hazard identification. Importantly, on the date of the fatality, SAEG had 2 forms of JHAs in place that were to be used for trench box activities, both of which identified hazards that Trans Mountain should have ensured were considered and incorporated into the CHRR and its own UHRR.

On this basis, there are reasonable grounds to believe that Trans Mountain failed to implement its management system process to identify and analyze all hazards and potential hazards when it failed to ensure that hazards for Spread 1 identified through JHAs were incorporated into SAEG's CHRR and the UHRR. There are also reasonable grounds to believe that Trans Mountain also failed to comply with Condition 2 of OC-065, a designated violation under subsection 2(3) of the AMP Regulations, through failing to implement its commitment filed on the record of the OH-001-2014 proceeding to comply with all health, safety, security and environmental laws, rules and regulations – in this case the requirement to take all reasonable care to ensure the safety and security of persons, including the SAEG workers who were disassembling the trench box, under section 94 of the CER Act.

Relevant Facts:

I. BACKGROUND

1. TMEP is approximately 1,176 km long, commencing at a storage terminal in Edmonton, AB and ending at the Westridge Marine Terminal in Burnaby, BC. The original Trans Mountain pipeline was built in 1953.
2. On 20 June 2019, the National Energy Board issued Certificate of Public Convenience and Necessity OC-065, authorizing Trans Mountain to construct and operate TMEP between Edmonton AB and Burnaby, BC.
3. Spread 1 of TMEP included construction of approximately 49.1 km of 914 mm pipeline, primarily within a transportation and utility corridor that surrounds the south side of the City of Edmonton. SAEG was the General Construction Contractor of Spread 1.
4. On 27 October 2020, a SAEG employee, [REDACTED], working on TMEP Shoefly 38A of Spread 1 in Edmonton, AB, was fatally injured while disassembling a Groundworks high arch trench box.

II. REGULATORY REQUIREMENTS WITH RESPECT TO OPR PARAGRAPH 6.5(1)(c) & CONDITION 2 of OC-065

5. The OPR contains requirements for regulated companies to establish, implement and maintain a management system.
6. Establishing and implementing a management system is a critical requirement to enable regulated companies to construct and operate pipelines in a manner that is consistent with the purpose of the OPR – namely, to ensure the

safety and security of persons; the safety and security of pipelines; and the protection of property and the environment.

7. Hazard identification and analysis is one of the first steps required in order to prevent, manage, and mitigate potentially dangerous conditions and exposure to such conditions. Paragraph 6.5(1)(c) requires regulated companies to establish and implement a process to identify and analyze “all hazards and potential hazards”.
8. Trans Mountain’s management system broadly defines “hazard” as “[a] condition, situation, or set of circumstances with the potential to cause an undesirable event” and a “potential hazard” as “[a] condition or set of circumstances which could develop into a hazard or a hazard which is not known to have been encountered by TMEP.”
9. Trans Mountain’s management system recognizes and affirms – under its description of “Regulatory Requirement” – that the primary outcome of the management system processes in paragraphs 6.5(1)(c)(d) and (e), and the OPR in general, is to “**ensure that all of the hazards and potential hazards have been identified** and that the inherent risks associated with each hazard are known, evaluated and controlled”.
10. When paragraph 6.5(1)(c) of the OPR is interpreted in connection with Trans Mountain’s management system definitions and acknowledged regulatory requirements, Trans Mountain was required at all relevant times to implement its management system process:
 - to identify and analyze all conditions, situations and sets of circumstances with the potential to cause undesirable events;
 - to identify and analyze all conditions and sets of conditions which could develop into a hazard or a hazard which is not known to have been encountered by TMEP; and
 - with a view of ensuring that all hazards and potential hazards have been identified.
11. Condition 2 of OC-065 requires, among other things, that Trans Mountain implement all of its commitments made on the record of the OH-001-2014 proceeding. One such commitment is to construct and operate the pipeline and facilities in a manner which complies with Kinder Morgan Canada’s Environment, Health, and Safety Policy. The policy provides that Trans Mountain would comply with all health, safety, security and environmental laws, rules and regulations. One such health, safety, security and environmental law is the CER Act, including section 94. Section 94 requires Trans Mountain take “all reasonable care” to ensure the safety and security of persons, including SAEG workers. A failure to comply with Condition 2 is a designated violation under subsection 2(3) of the AMP Regulations.

III. RELEVANT FACTS & FINDINGS

A. Failure to approve SAEG Spread 1 CHRMP

(i) Trans Mountain Management System Process Required a Trans Mountain-approved Spread 1 CHRMP

12. Trans Mountain’s management system process includes both Trans Mountain Canada Inc. (TMCI) Integrated Safety Loss Management System (ISLMS) components and project-developed components.
13. The TMCI ISLMS HRM Standard was one component of Trans Mountain’s management system process that addressed the identification and analysis of all hazards and potential hazards on TMEP, as confirmed by an August 3, 2017, National Energy Board (NEB) Pre-Construction Compliance Audit Report; a June 30, 2020 CER Contractor Oversight Audit Report; Trans Mountain’s TMEP Quality Assurance Program Manual; Trans Mountain’s Spread 1 Project Execution Plan dated October 21, 2019; and the UHRMP.
14. The purpose of the ISLMS HRM Standard, and supporting procedures and guidelines, was to establish requirements for identifying, analyzing, evaluating, responding to, and reporting on “all hazards and risks.” As part of these requirements, the ISLMS HRM Standard required Trans Mountain to review and approve SAEG’s hazard identification process.

15. Trans Mountain's HSMP was also a component of its management system process to identify and analyze all hazards and potential hazards. The HSMP required SAEG to develop a "hazard and risk control program", which was to include elements for hazard identification and reporting.
16. Trans Mountain's UHRMP was similarly a component of its management system process to identify and analyze all hazards and potential hazards on TMEP. According to the UHRMP, its purpose was to identify hazard identification, reporting and risk management requirements for TMEP personnel and construction contractors working on behalf of the project. The UHRMP required Trans Mountain to review and accept SAEG's plan for identifying, documenting and reporting hazards and potential hazards.
17. The requirement that Trans Mountain approve a SAEG hazard identification process / procedure through a Spread CHRMP is confirmed in Trans Mountain's Owner Contractual Requirements. These terms state the following:
- [3.1] The purpose of this Attachment C-12 – Contractor Hazard Risk Register is to outline the minimum requirements for Contractor's development of a Contractor Hazard Risk Register ("CHRR") and Contractor Hazard Risk Management Procedure ("CHRMP") for managing identified hazards and risks...
- [4.5] The continuous identified (sic) of hazard and assessment of risks will enable TMEP to meet the requirements outlined in the OPR Section 6.5(1) manage and control its risks, and deliver on its project goals, objectives and targets.
- [5.2] Contractor must implement a localized risk management process or a related safety management program (Contractor Risk Management Program or System) that contains a hazard and risk management procedure (CHRMP) accepted by the Owner.**
- [5.4] All Contractors will prepare and submit a CHRMP for the agreed upon work activities.**
- [6.1] The CHRMP must contain the following details that are applicable during the execution of the Work:**
- **Hazard Identification...** [emphasis added]
18. The Owner Contractual Requirements included minimum requirements for a Spread 1 CHRMP, including:
- (a) a process for the identification and documentation of new hazards or risks identified while conducting construction activities;
 - (b) a process of how and when information is reported relating to new hazards or risks;
 - (c) the authority and obligation of "Contractor Group's Personnel" to identify and report hazards;
 - (d) the authority and obligation of "Contractor Group's Personnel" to refuse unsafe work; and
 - (e) a process to document the implementation of preventative or mitigative measures.
19. The Spread 1 CHRMP was intended to detail the requirements through which hazards are managed and then subsequently included in procedures and Process Hazard Analyses/Job Hazard Analysis/Job Safety Analyses as applicable, and was to contain the process by which each contractor communicates hazards to their personnel. Importantly, the Owner Contractual Requirements required that Trans Mountain approve the CHRMP prior to commencement of work.
20. Based on the above, Trans Mountain's management system process required that Trans Mountain, at a minimum, ensure that a Trans Mountain-approved SAEG CHRMP was in place on the date of the fatality.

(ii) Trans Mountain failed to ensure that SAEG had an approved CHRMP in place for Spread 1 on the date of the fatality

21. On October 27, 2020, SAEG did not have a Trans Mountain-approved CHRMP as required by Trans Mountain's management system process in connection with identifying all hazards and potential hazards encountered during construction on Spread 1, including those involving trench box disassembly activities on that day.
22. SAEG had submitted a "Hazard Management Program" as evidence of a CHRMP on April 28, 2020. Trans Mountain's review of this procedure noted deficiencies and the procedure was rejected. The deficiencies noted with respect to the Hazard Management Program included the following:
- the program incorrectly defined risk;
 - the program did not reference TMEP's risk matrix;
 - the program did not include all TMEP hazards;
 - the program did not reference the CHRR process, a "fundamental" process required for TMEP;
 - the program did not include definitions / abbreviations for "risk", "CHRR", "hierarchy of controls" and "worst-case credible scenario"; and
 - the program lacked details on how work standards, TASC (Task Analysis Safety Cards) and JHA risks were to be mapped to the TMEP risk matrix and inputted into the CHRR.
23. SAEG subsequently submitted a draft CHRMP for Spread 1 on September 15, 2020. This CHRMP – 18 pages in length – was not approved on the date of the fatality. It was still unapproved when SAEG's Spread 1 contract was terminated by Trans Mountain.
- B. Trans Mountain's failure to ensure that SAEG's Spread 1 CHRR and Trans Mountain's TMEP UHRR Spread 1 hazard entries identified and incorporated hazards from Spread 1 Job Hazard Assessments (JHAs)**
- (i) Trans Mountain Management System Process Required Trans Mountain to approve and review SAEG's Spread 1 CHRR and to incorporate contractor-identified hazards / risks into its TMEP UHRR**
24. As noted above, the ISLMS HRM Standard establishes requirements for identifying, analyzing, evaluating, responding to, and reporting on all hazards and risks. The CER's regulatory expectation of a management system process that addresses all hazards and risks is also expressly recognized in Trans Mountain's management system process:
- [3.1.2] According to the NEB:
- “[I]t is the Board's view that **the primary outcome of the processes referenced (Paragraphs 6.5(1)(c), (d) and (e) of the OPR), and the OPR in general, is to ensure that all of the hazards and potential hazards have been identified** and that the inherent risks associated with each hazard are known, evaluated and controlled...[emphasis added]
25. The ISLMS HRM Standard informs, and works with, other elements of Trans Mountain's management system process to identify all hazards and potential hazards, including the ISLMS HR Guidelines, the UHRMP and Owner Contractual Requirements.
26. Together these documents require hazards to be identified and included in a CHRR that Trans Mountain reviews and approves. In the course of such reviews, Trans Mountain "executes QA [Quality Assurance] / QC [Quality Control] on CHRR / individual risks" and analyzes, at a minimum: (i) hazards; (ii) risk statements; (iii) adequacy of controls; and (iv) revised residual risk rankings. Trans Mountain then incorporates hazards and risks into its own TMEP UHRR. This process was to occur throughout the duration of the construction of TMEP.
27. Once SAEG's CHRR is approved by Trans Mountain, there are further hazard and risk review processes in place. Hazards of particular residual risk rankings are subject to a mandatory "review cycles". In addition to these mandatory review cycles, Trans Mountain also requested monthly review meetings with contractors to review risk registers. CHRR monthly review meetings were held with SAEG, including in August and September of 2020.

28. Ensuring a comprehensive CHRR was important as it was a requirement of Trans Mountain that relevant hazards and risks identified in the CHRR must be communicated to all SAEG workers to ensure they are aware of those risks pertinent to their work area and that controls are effectively implemented.

(ii) Trans Mountain Management System Process Required Trans Mountain to ensure that hazards identified from JHAs are considered and incorporated into SAEG's Spread 1 CHRR and Trans Mountain's TMEP UHRR

29. Trans Mountain's Owner Contractual Requirements, a component of its management system process for identifying and analyzing all hazards and potential hazards, contained an expectation that SAEG use JHAs as sources for identifying hazards for inclusion into the CHRR.

30. JHAs were SAEG documents that provided general task-specific hazard identification and mitigation measures that were to be reviewed and communicated by field level supervisors to individual crews. They were to be completed prior to start of non-routine, high risk tasks or in the absence of written work procedures.

31. Trans Mountain's requirement for SAEG to identify hazards through JHAs for inclusion into its CHRR is confirmed by a Trans Mountain May 18, 2020 comment on SAEG's Hazard Management Program (submitted by SAEG as evidence of a CHRMP and was ultimately rejected). For one of the deficiencies, Trans Mountain proposed the following change: "[p]rovide details on how Work Standards, TASC (Task Analysis Safety Card) and JHA risks are mapped to the TMEP Risk Matrix and inputted into the CHRR". This comment demonstrates that Trans Mountain's requirements – through which it was to ensure were followed through its quality assurance / quality control process, review cycles and meetings – involved inclusion of hazards and risks identified through JHAs into SAEG's Spread 1 CHRR and Trans Mountain's TMEP UHRR.

32. As of the date of the fatality, SAEG had two JHA forms relating to trench box activities:

- (a) a SAEG JHA titled "Trench Box Assembly & Use" form dated January 2020, which identified multiple hazards including "[l]ack of documentation for task"; and
- (b) a SAEG JHA titled "Trench Box Installation in Excavation" form dated February 2020, which identified multiple hazards including "[l]ack of documentation for task", "trench box failure" and "incorrect information followed" to ensure that "procedures appropriate to type of trench box being used are reviewed and followed."

(iii) Trans Mountain failed to ensure that SAEG's Spread 1 CHRR incorporated hazards identified from JHAs and failed to ensure that hazards identified for Spread 1 in its TMEP UHRR included those identified from SAEG JHAs

33. On the date of the fatality, Trans Mountain failed to ensure that hazards identified from Spread 1 JHAs were incorporated in SAEG's Spread 1 CHRR. **Notably, on the date of the fatality, none of the hazards identified in SAEG's CHRR for Spread 1 were identified as obtained through SAEG's JHAs, including those relating to trench box activities.**

34. Furthermore, on the date of the fatality, Trans Mountain failed to ensure that hazards identified for Spread 1 in its TMEP UHRR included those identified from SAEG JHAs, including those relating to trench box activities. **On the date of the fatality, none of the hazards identified in Trans Mountain's UHRR for Spread 1 were identified as obtained through SAEG JHAs.**

35. The apparent absence of any hazards in SAEG's Spread 1 CHRR and Trans Mountain's TMEP UHRR identified from Spread 1 JHAs is explained by Trans Mountain's recently expressed position that the CHRR (which directly informs the UHRR) is not intended to capture specific risks related to trench box operations:

...**The submitted CHRR** was constructed to identify worst-case credible scenarios arising from generic work activities, but **was not intended to include every specific work activity. Including specific work activities for each and every task (such as assembly**

and disassembly of trench boxes) in the CHRR would result in a UHRR so large as to be unmanageable.

As a result, specific risks related to Trench Box operations (assembly, lowering-in, disassembly) would not be expected to be identified in the CHRRs or CHRMP documents. Task specific JHAs and TASC cards, as identified in the CHRMP Sections 10 and 9.1, respectively, were to be developed and followed as the tool to identify hazards and implement controls for these Trench Box tasks... [emphasis added]

36. Trans Mountain's position is contrary to the Owner Contractual Requirements, which requires that JHAs be used as a source of hazard / risk identification for the purpose of inclusion into SAEG's Spread 1 CHRR and, correspondingly, Trans Mountain's UHRR.
37. Trans Mountain's position is also inconsistent to the ISLMS HR Guidelines, which make clear that risk statements to be included in the UHRR were to be detailed and comprehensive, with even overlapping hazards recorded by separate entries. In particular the guidelines provide for various "Dos & Don'ts" that contemplate a robust and exhaustive approach to hazard identification and recording (with corresponding CER examples inserted):
 - DO create **separate risk statements** for multiple contributing causes (e.g., operator error, wrong tools used, failure to follow procedures, lift failure) that could lead to the same hazard (e.g. trench box collapse),
 - DO create **separate risk statements** for multiple hazards (e.g., untrained personnel, poor safety culture) that could lead to the same event (e.g., worker contact with uncontrolled trench box component)
 - DO create **separate risk statements** for multiple events (e.g., worker contact with uncontrolled trench box component, mobile equipment contact with uncontrolled trench box component) that could result from the same hazard (e.g., untrained personnel).
38. Trans Mountain's position is also inconsistent with its post-incident conduct, when trench box related hazards (which Trans Mountain itself acknowledges can involve "high and very high risks, as respectively classified in orange and red below) were added to TMEP contractors' CHRRs and Trans Mountain's TMEP UHRR:

<u>Risk ID</u>	<u>Conseq. Category</u>	<u>Hazard</u>	<u>Risk Description</u>	<u>Inherent Risk</u>	<u>Controls</u>	<u>Qualified Controls</u>	<u>Residual Risk Rating</u>
1-SAEG-124	HS	Dropped objects	Worker's Assembly and disassembly of trench boxes resulting in impact to health and safety.	15	Only designated Foremen and crews will be permitted to assemble or disassemble trench boxes. The designated Foremen and crews will be trained and have competence verified and documented. Crews performing Trenchbox handling (sic) tasks must complete a TASC with the identified hazards and controls identified, Crew must review the associated (sic) JHA for of the trench box, manufacturer's operating manuals must be available on site for the specific trench box and must be (sic) reviewed by the crews	TP: designated Foremen and crews will be permitted to assemble or disassemble trench boxes. TP: designated Foremen and crews will be trained and have competence verified and documented.	10
5A-SMJV-202	HS	Dropped objects	Dropped trench box / shoring wall or panel hitting a worker resulting in a fatality	8	Competent Supervision, Crew workers competent in trench box assembly/disassembly procedures.	TP: Trench Box JSA TP: Trench Awareness Course (includes trench box assembly/disassembly) for personnel involved in trench	4

					Follow Trench Box JSA; Manufacturer's assembly instructions and specifications. TP: Trench Box JSA TP: Trench Awareness Course (includes trench box assembly/disassembly) for personnel involved in trench box assembly/disassembly and installation/removal	box assembly/disassembly and installation/removal	
TERM-KLTP-157	HS	Equipment – Heavy Machinery	Worker injury or fatality during assembly/disassembly of trench boxes due to inexperience, not following procedures, incorrect methodology.	20	- Where possible trench boxes shall not be assembled or disassembled on site. - All workers involved in Assembly / Disassembly of Trench Boxes are to be trained and deemed competent in the specific manufacturer's procedure for Assembly / Disassembly for the Trench Box being used. - Procedures for assembly/disassembly shall be reviewed signed off and followed by the crew involved. - Ensure workers remain out of the line of fire during lifting/handling	TP: Where possible trench boxes shall not be assembled or disassembled on site. TP: All workers involved in Assembly / Disassembly of Trench Boxes are to be trained and deemed competent TP: Procedures for assembly/disassembly shall be reviewed signed off and followed by the crew involved. TP: Ensure workers remain out of the line of fire during lifting/handling	4
3-4A-LSLP-131	HS	Fit for Duty	Risk of exposure to line of fire due to the lack of training and experience while assembly, disassembling (sic) Trench boxes	16	-LSLP Site-Specific Safety Plan -Assessmbly disassembly procedure -Manufacturer instruction at the workplace -Manufacturer training to supplement supervisors / oversight (sic) of task	TP: Create training for specific task TP: Assessmbly (sic) disassembly procedure TP: Manufacturer instruction at the workplace	12
7-KLTP-139	HS	Fit for Duty	Worker injury or fatality during assembly/disassembly of trench boxes due to inexperience, not following procedures, incorrect methodology	12	- Where possible trench boxes shall not be assembled or disassembled on site. - All workers involved in Assembly / Disassembly of Trench Boxes are to be trained and deemed competent in the specific manufacturer's procedure for Assembly / Disassembly for the Trench Box being used. - Procedures for assembly/disassembly shall be reviewed signed off and followed by the crew involved	TP: Where possible trench boxes shall not be assembled or disassembled on site. TP: All workers involved in Assembly / Disassembly of Trench Boxes are to be trained and deemed competent in Assembly / Disassembly for the Trench Box	8

REA-SLLP-105	HS	Fit for Duty	Worker injury or fatality resulting from improper handling of Trenchbox	16	<p>Training and competency completed prior to using trench boxes Toolbox / FLHA completed prior to task commencing</p> <p>All workers to review JHA prior to starting task.</p> <p>Adhere to Manufacturers specifications</p> <p>Documented Pre Inspection of Spreader Pins and Side walls prior to Assembling / dismantling trenchbox</p> <p>Competency completed on workers assembling and disassembling trenchboxes</p>	<p>TP: Training and competency completed prior to using trench boxes</p> <p>TP: Documented Pre Inspection of Spreader Pins and Side walls prior to Assembling / dismantling trenchbox</p> <p>TP: Competency completed on workers assembling and disassembling trenchboxes</p>	8
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39. More broadly, Trans Mountain's position – that hazards relating to specific activities for trench box operations would not be expected to be included in SAEG's Spread 1 CHRR and UHRR because it would make the UHRR too large – appears to be inconsistent with the UHRR's purpose, which is:
- to identify all conditions, situations and sets of circumstances with the potential to cause undesirable events;
 - to identify all conditions and sets of conditions which could develop into a hazard or a hazard which is not known to have been encountered by TMEP; and
 - all with a view of ensuring that all such hazards and potential hazards have been identified.
40. It appears that Trans Mountain is now seeking to characterize inherent risks associated with trench box activities as less than high, describing them as “not inherently high-risk activities that would warrant special treatment in the CHRR or UHRR documents.” This statement is inconsistent with high and very high inherent risk classifications assigned by multiple contractors with respect to trench box activities and incorporated by Trans Mountain into the post-incident UHRR.
41. Finally, the above position does not obviate the fact that Trans Mountain's management system process, including Owner Contractual Requirements, required Trans Mountain to ensure that SAEG's Spread 1 CHRR and its TMEP UHRR incorporated hazards from Spread 1 JHAs. This was not done on the date of the fatality.

IV. CONCLUSIONS

On the date of the fatality, SAEG had developed a Spread 1 CHRMP however it was not approved by Trans Mountain TMEP personnel. There are reasonable grounds to believe that Trans Mountain violated 6.5(1)(c) of the OPR on October 27, 2020 when it did not implement its management system process, including Owner Contractual Requirements, by failing to ensure that SAEG had an approved CHRMP in place to address all hazards and potential hazards, including those relating to trench box disassembly activities.

On the date of the fatality, Trans Mountain also failed to ensure that SAEG's Spread 1 CHRR and its own TMEP UHRR had included hazards identified as being obtained through Spread 1 JHAs. Accordingly, there are also reasonable grounds to believe that Trans Mountain violated paragraph 6.5(1)(c) of the OPR on October 27, 2020 when it failed to ensure that the CHRR / UHRR included hazards identified as being identified through Spread 1 JHAs. Had Trans Mountain ensured that SAEG's CHRR identified Spread 1 hazards from JHAs and that such hazards were captured in its own UHRR, it is possible that hazards associated with trench box activities stemming from the above-described JHAs (along with controls) could have been identified and analyzed. This could potentially have contributed to avoiding or mitigating the hazards associated with trench box activities that led to the fatality.

The above failures give rise to reasonable grounds to believe that Trans Mountain was in violation of Condition 2 of 0C-065, which is a designated violation under subsection 2(3) of the AMP Regulations, since it failed to implement its commitment filed on the record of the OH-001-2014 proceeding to comply with all health, safety, security and environmental laws, rules

and regulations – which, in this case – is the requirement to take “all reasonable care” to ensure the safety and security of persons under section 94 of the CER Act.

Specifically, Trans Mountain did not take all reasonable care to ensure the safety and security of persons under section 94 of the CER Act, including the SAEG workers who were disassembling the trench box on the date of the fatality, as summarized below:

- Trans Mountain did not take all reasonable care when it failed to ensure that SAEG had an approved CHRMP in place on the date of the fatality. The reasonableness of this expectation is informed, among other things, by the fact that an approved CHRMP was a requirement of Trans Mountain’s management system process; the potentially high and very high risks that are involved in constructing TMEP, including activities relating to trench boxes; and, in this case, the fatal nature of the harm that resulted; and
- Trans Mountain did not take all reasonable care when it failed to ensure that JHA-identified hazards were identified as included in the Spread 1 CHRR as required by the Owner Contractual Requirements and subsequently the UHRR on the date of the fatality, including through its quality assurance / quality control process (e.g., monthly review meetings) and corrective tools. The reasonableness of this expectation is informed by, among other things, the knowledge and skill that Trans Mountain should have engaged for TMEP (including through its subject matter experts); the fact that the requirement for JHA hazards to be included in the Spread 1 CHRR (to be incorporated subsequently into its own UHRR) is contained in the Owner Contractual Requirements, which have as their stated objective the continuous identification of hazards and assessment of risks; the potentially high and very high risks associated with construction activities relating to TMEP, including those relating to trench box activities; and the gravity of potential harm (and in this case the fatal nature of the harm that resulted).

Based on the above, there are reasonable grounds to believe that Trans Mountain violated paragraph 6.5(1)(c) of the OPR and committed a designated violation under subsection 2(3) of the AMP Regulations by failing to comply with Condition 2 of OC-065.

Section Three – Penalty Calculation / Calcul des sanctions

A) Baseline Penalty (Gravity Level = 0) / Pénalité de base (côte de gravité = 0) <i>Refer to AMP Regulations, Subsection 4(1) / Voir le Règlement, paragraphe 4(1)</i>								
Category / Catégorie	Individual / Personne physique	Any Other Person / Autre Personne						
Type A	<input type="checkbox"/> \$1,365	<input type="checkbox"/> \$5,025						
Type B	<input type="checkbox"/> \$10,000	<input checked="" type="checkbox"/> \$40,000						
B) Applicable Gravity Value / Côte de gravité globale applicables <i>(Refer to AMP Regulations, Subsection 4(2) / Voir le Règlement, paragraphe 4(2))</i>			Gravity Level					
			Mitigating / Atténuer			Aggravating / Aggravantes		
			-2	-1	0	+1	+2	+3
<input checked="" type="checkbox"/> Other violations in previous seven (7) years / Autres violations au cours des sept (7) années précédentes Not applied			--	--	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	--
<input checked="" type="checkbox"/> Any competitive or economic benefit derived from the violation / Avantages concurrentiels ou économiques découlant de la violation Not applied			--	--	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	--
<input checked="" type="checkbox"/> Reasonable efforts to mitigate/reverse violation’s effect/reverse violation’s effect / Efforts raisonnables déployés pour atténuer ou annuler les effets de la violation Not applied			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	--

Negligence on part of the person who committed the violation / Négligence de la part de la personne ayant commis la violation

--	--	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	--
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As described above, Trans Mountain was negligent in that it did not take all reasonable care to ensure the safety and security of persons, including the SAEG workers who were disassembling the trench box on the date of the fatality, as summarized below:

- Trans Mountain did not take all reasonable care when it failed to ensure that SAEG had an approved CHRMP in place on the date of the fatality. The reasonableness of this expectation is informed, among other things, by the fact that an approved CHRMP was a requirement of Trans Mountain's management system process; the potentially high and very high risks that are involved in constructing TMEP, including activities relating to trench boxes; and, in this case, the fatal nature of the harm that resulted; and
- Trans Mountain did not take all reasonable care when it failed to ensure that JHA-identified hazards were identified as included in the Spread 1 CHRR as required by the Owner Contractual Requirements and subsequently the UHRR on the date of the fatality, including through its quality assurance / quality control process (e.g., monthly review meetings) and corrective tools. The reasonableness of this expectation is informed by, among other things, the knowledge and skill that Trans Mountain should have engaged for TMEP (including through its subject matter experts); the fact that the requirement for JHA hazards to be included in the Spread 1 CHRR (to be incorporated subsequently into its own UHRR) is contained in the Owner Contractual Requirements, which have as their stated objective the continuous identification of hazards and assessment of risks; the potentially high and very high risks associated with construction activities relating to TMEP, including those relating to trench box activities; and the gravity of potential harm (and in this case the fatal nature of the harm that resulted).

Reasonable assistance to the Regulator with respect to the violation / Collaboration raisonnable avec la Régie en ce qui a trait à la violation

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	--
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Trans Mountain assisted the CER by working to make personnel (both its own and SAEG's) available for CER interviews post-fatality.

In the course of the CER's compliance activities, the CER issued, and Trans Mountain responded to, many Information Requests, involving the disclosure of over 1000 documents.

Trans Mountain responded to numerous Information Requests from the CER, generally in a timely way. That said, in certain instances Trans Mountain did not always fully answer the questions asked (e.g., CV2021-496 Information Requests 4.13, 4.15, 4.22, 4.37) and there were challenges to having Trans Mountain confirm and provide applicable documents at the time of the fatality (e.g., CV2021-496 Information Requests 4.13, 4.24 & IR 8.01). Documents requested at the time of the fatality were not always provided as requested, requiring additional requests to clarify information submitted.

Further, Trans Mountain was required by Amended Inspection Officer Order RRW-001-2020 to conduct an investigation to determine the root cause(s) for the unsafe act or conditions resulting in [REDACTED] fatality and submit a copy of the report to the CER. Trans Mountain arranged for a third-party investigation and provided a report to the CER. However, when the CER asked for the underlying records relating to this investigation, Trans Mountain asserted privilege over all of the underlying records and did not to provide them even though the resulting report had been disclosed. This did not assist the CER in conducting its regulatory compliance activities.

Taken together, a gravity level of -1 is appropriate in the circumstances.

After becoming aware of the violation, promptly reported the violation to the Regulator / La rapidité avec laquelle, après avoir pris connaissance de la violation commise, la violation a été signalée à la Régie

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	--
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Not applicable

Steps taken to prevent reoccurrence of the violation / Mesures prises pour prévenir les récidive

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	--
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Although there is evidence that SAEG submitted a CHRMP for acceptance as part of Trans Mountain's post-fatality Corrective and Preventative Actions, there is no evidence that it was subsequently approved. More broadly, there is also no evidence that CHRMPs, or their equivalents, have been approved throughout TMEP or that JHA-related hazards are now being expressly incorporated in other contractor CHRRs in accordance with Trans Mountain's management system process and included in Trans Mountain's project UHRR.

There is evidence that Trans Mountain takes the view that contractor CHRRs is not intended to include specific work activities for tasks such as assembly and disassembly of trench boxes, which appears inconsistent with Trans Mountain's management system process requirement to include JHA-related hazards into CHRRs and incorporation into the UHRR. That said, Trans Mountain did ask SAEG to proactively identify tasks not previously identified in the CHRR, and trench box hazards have nevertheless been incorporated in multiple contractor CHRRs and Trans Mountain's project UHRR.

Moreover, Trans Mountain took steps to prevent a recurrence of another fatality relating to trench boxes, as demonstrated by a Trench Box Alert immediately following the fatality, safety stand-downs across the company that included all employees and contractors, Safety Bulletin #27 reinforcing messages about following prescribed standards, implementation of a monthly risk validation inspection process and updated procedures in response to the incident that specifically address trench box operations, some of which were filed in response to the specified measures of the inspection officer order or notices of non-compliances. However, these steps do not relate directly to Trans Mountain approval of CHRMPs and incorporation of JHA-related hazards into contractor CHRRs (and inclusion into the UHRR) and accordingly are not reflected in the gravity level that has been applied.

<input checked="" type="checkbox"/> For Type B violations, whether the violation was primarily reporting/record-keeping failure / Dans le cas d'une violation de type B, la violation est reliée principalement à la production de rapports ou à la tenue des dossiers	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	--	--
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Not applicable

<input checked="" type="checkbox"/> Any other aggravating factors in relation to risk of harm to people or the environment / Autres facteurs aggravants pouvant causer du tort sur les personnes ou à l'environnement	--	--	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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In this case a gravity level of +3 is warranted given, among other reasons, the following:

- [REDACTED] fatal injury;
- Lack of hazard identification has been identified as an immediate / direct cause of the fatality and the lack of a Trans Mountain approved CHRMP (a process through which hazards are identified) and inclusion of JHA-related hazards in SAEG's Spread 1 CHRR could potentially have contributed to avoiding or mitigating the hazards associated with trench box activities that led to the fatality;
- The inherent risks associated with trench box activities can be described as high to very high and residual risks can still be described as high. The resulting harm can involve significant injury and, in this case, fatality. The inherent likelihood of an adverse consequence as high as "expected" (defined as annually or more frequently) and residual likelihood as "rare". Taken together, the risks associated with trench box activities – both inherent and residual – can be significant to individuals affected;
- Trans Mountain compliance audit of SAEG in connection with Spread 1 work revealed non-compliances and non-conformances (some of which had not been resolved at the time of the fatality) that should appropriately have led to greater diligence and urgency with respect to ensuring that its management system process relating to identifying and analyzing all hazards and potential hazards was implemented; and
- The existence of TMCI operational documents that appear to recognize and control for hazards associated with trench box activities within excavation, trenching and shoring procedures (the document speaks to training, re-certification and following manufacturer's instructions), yet Trans Mountain (an affiliate of TMCI) did not use this knowledge relating to trench boxes to identify and analyze hazards and ensure that such hazards and risks were incorporated into contractor CHRRs and the UHRR prior to the fatality.

C) Total Gravity Value / Côte de gravité globale

(adjustments made for gravity values in B) based on mitigating or aggravating factors applied)

+3

D) Daily Penalty / Sanctions quotidiennes <i>(baseline penalty adjusted for the final gravity level / Pénalité de base d'après la côte de gravité)</i>	\$ 76,000
E) Number of Days of Violation / Durée de la violation <i>(If more than one day, justification must be provided / si plus d'une journée, prière de justifier)</i> N/A	1
Notes to explain decision to apply multiple daily penalties, or "Not Applicable" / Notes pour expliquer la décision d'appliquer des pénalités multiples quotidiennes, ou «sans objet».	
Not Applicable	

Section Four – Total Penalty Amount / Montant total de la pénalité

Note: The total penalty amount shown is based on the period described in section one above. If compliance has not been achieved, a subsequent Notice of Violation may be issued.

Le montant total des pénalités est calculé d'après la période décrite dans la première section. Si la situation n'a pas été rétablie, un autre Procès-verbal pourrait être envoyé.

Total Penalty Amount / Montant total de la pénalité **\$ 76,000**

Section Five – Due Date / Date limite

(30 days from date of service of Notice of Violation / 30 jours suivant la signification de la date indiquée sur l'accusé de réception du Procès-verbal)

Due Date / Date limite	December 6, 2022
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Keith Landra

Designated Officer pursuant to ss. 116(2) of the CER Act
Administrative Monetary Penalties

Fonctionnaire désigné sous l'alinéa 116(2) de la LRCE
Sanctions administratives pécuniaires

Notes

You have the right to make a request for a review of the amount of the penalty or the facts of the violation, or both, within 30 days after the Notice of Violation is served.

If you do not pay the penalty nor request a review within the prescribed period you are considered to have committed the violation and you are liable for the penalty set out in the Notice of Violation. The penalty is due on the date indicated above.

The unpaid penalty amount is a debt due to the Crown and may be recovered by collection procedures stipulated in the Financial Administration Act.

The information regarding the violation may be posted on the CER website:

- a) 30 days from the date this Notice of Violation is served; or
- b) upon issuing a decision following a Request for Review.

To Make Payment:

You may remit your fee payment by Electronic Funds Transfer (EFT) or by cheque payable to the order of Receiver General for Canada.

EFT payments can be arranged by contacting the Director of Financial Services, Monday to Friday, from 09:00 to 16:00 Mountain Time:

Telephone: 403-919-4743 / 800 899-1265

Fax: 403-292-5503 / 877-288-8803

Cheques should be made out to the Receiver General for Canada and mailed to:

Canada Energy Regulator
Attention: Finance
Suite 210, 517 - 10th Avenue SW
Calgary, Alberta T2R OA8

Your completed *Payment* form shall be enclosed with your payment.

Notes

Vous disposez de 30 jours après la signification de la date indiquée sur l'accusé de réception du Procès-verbal pour demander une révision du montant de la pénalité, ou les faits rapportés, ou les deux.

Si les sanctions ne sont pas acquittées et qu'aucune révision n'est demandée, vous êtes considérés comme coupable de la violation et vous devez payer les sanctions précisées dans le Procès-verbal. Les sanctions sont payables à la date indiquée ci-dessus.

Un défaut de paiement constitue une créance envers l'Etat et peut être recouvré en utilisant tous les recours prévus dans la Loi sur la gestion des finances publiques.

L'information concernant la violation pourrait également être affichée sur le site Web de la RCE:

- a) 30 jours après la signification de la date indiquée sur l'accusé de réception du Procès-verbal, ou
- b) dès qu'une décision a été rendue à la suite d'une Demande de révision.

Paiement:

Vous pouvez payer le montant dû par transfert électronique de fonds (TEF) ou par chèque établi à l'ordre du Receveur général du Canada.

Pour se prévaloir du service de transfert électronique, communiquer par téléphone avec le Directeur, Service des finances, du lundi au vendredi, de 9 h à 16 h, heure des Rocheuses :

Téléphone: 403-919-4743 / 800-899-1265

Télec. : 403-292-5503 / 877-288-8803

Les chèques doivent être établis à l'ordre du Receveur général du Canada et postés à l'adresse suivante:

Régie de l'énergie du Canada
Attention: Finance
Pièce 210, 517 Dixième Avenue S.-0.
Calgary (Alberta) T2R OA8

Le formulaire de *paiement* dûment rempli doit accompagner le paiement.