



**Administrative Monetary Penalty  
Sanction administrative pécuniaire**

**Notice of Violation / Procès-verbal**

**REFERENCE NUMBER / N° DE RÉFÉRENCE:**

AMP-004-2022

**Information for Pipeline Company/Third Party/Individuals**

**Information pour la société pipelinère / une tierce partie / un particulier:**

<b>Name / Nom:</b>	Trans Mountain Pipeline ULC	<b>TOTAL PENALTY AMOUNT / MONTANT TOTAL DES PÉNALITÉS:</b>
<b>Contact / Contactez:</b>	Dawn Farrell	
<b>Title / Titre:</b>	President and Chief Executive Officer	<b>\$ 88,000</b>
<b>Address / Adresse:</b>	Suite 2700, 300 – 5 <sup>th</sup> Avenue SW	<b>Date of Notice / Date du Procès :</b>
<b>City / Ville:</b>	Calgary	October 27, 2022
<b>Province / State / Etat:</b>	Alberta	<b>Regulatory Instrument # / N° de l'instrument réglementaire:</b>
<b>Telephone / Téléphone:</b>	[REDACTED]	OC-065
<b>Email / Courriel:</b>	[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"/> <b>Single-day violation / Violation d'un jour</b> <b>Date of Violation / Date de la violation:</b> October 27, 2020		
<input type="checkbox"/> <b>Multi-day Violation/ Violation multi-journée:</b> N/A		
<b>Total Number of Days / Nombre total de jours:</b> 1	<b>Has compliance been achieved? La situation est-elle rétablie?</b>	<input checked="" type="checkbox"/> Yes / Oui <input type="checkbox"/> No / Non
If no, a subsequent NOV may be issued. Si non, un autre Procès verbal de violation pourrait être envoyé		
<b>Location of Violation / Lieu de la violation:</b>	Trans Mountain Expansion Project: Spread 1	
<b>Short Form Description of Violation / Description abrégée de la violation</b> Failure to establish, develop, implement, maintain and document processes as prescribed		
<b>Act or Regulation/Section:</b> Canadian Energy Regulator Onshore Pipeline Regulations (OPR), paragraph 6.5(1)(k)		

- 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 accordée 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:

1. 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 (SOR/99-294) (OPR)*, a 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.
2. 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.
3. On October 27, 2020, [REDACTED], a SAEG employee, was fatally injured while disassembling a Groundworks high arch trench box at Shoefly 38A of Spread 1 in the vicinity of Edmonton, AB.
4. 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) had received no training and had no experience with disassembling the high arch trench box.
5. 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 obligations, including those contained in the OPR. As part of the CER's regulatory compliance activities, a CER [Inspection Officer Order RRW-001-2020](#) was issued on October 30, 2020.
6. On the date of the fatality, Trans Mountain had a management system process to verify that persons working with, or on behalf of, the company were trained and competent and for supervising them to ensure that they performed their duties in a manner that was safe. Trans Mountain's process included provisions contained in various Trans Mountain TMEP documents including, without limitation, the following:
  - a TMEP Training Plan;
  - a TMEP Contractor Competency Assurance Plan (**CCAP**);
  - a TMEP Quality Assurance Program Manual (**QAP Manual**);
  - a TMEP Health and Safety Management Plan (**HSMP**, inclusive of the TMEP Inspection, Measuring and Monitoring Program (**IMM Program**));
  - a TMEP Health and Safety Inspector's Guideline (**Inspector's Guideline**); and
  - contractual documents, including Project Management Agreement, Exhibit B – Description of Project Management Services and Exhibit C – Owner's Requirements Attachment C-2 Health and Safety Requirements (**Owner Contractual Requirements**).
7. Paragraph 6.5(1)(k) of the OPR requires that Trans Mountain implement this management system process at all times. Implementation involves both putting into action the requirements of the management system process and

ensuring that the actions are conducted appropriately in a manner consistent with the OPR's requirement that management systems be explicit, comprehensive and proactive.

8. Trans Mountain's management system process is designed to be implemented, at least in part, through contractors who represent Trans Mountain on TMEP, called "Contractors-Owner Representatives". Examples of Contractors-Owner Representatives in relation to Spread 1 included the Health and Safety Lead (**H&S Lead**) and Field Health and Safety Inspectors (**FSIs**), who were critical to implementing Trans Mountain's management system process for supervising contractors.
9. On the date of the fatality, Trans Mountain did not implement its management system process for verifying the competence of various Contractors-Owner Representatives working in Spread 1, including a Project Manager; Construction Manager; three Health and Safety Leads; a General Inspector; and four FSIs (**Spread 1 Safety Personnel**). Despite competency concerns arising with respect to certain of these personnel during the course of Spread 1 construction, there are no records demonstrating that Trans Mountain implemented its management system process to verify that post-hiring competency evaluations for Spread 1 Safety Personnel were being conducted, including through audits, assessments and inspections. Further, Trans Mountain could not produce any documented post-hiring competency evaluations of these individuals pursuant to the requirements contained in CCAP, the QAP Manual and Owner Contractual Requirements.
10. On the date of the fatality, Trans Mountain also did not implement its management system process when it failed to ensure that the training and competence of the SAEG crew disassembling the high arch trench box on Shoefly 38a had been verified as per CCAP, HSMP and the Inspector's Guideline. On that day, an FSI – whose role was to function as Trans Mountain's representative on the field – attended the Shoefly 38a worksite shortly before the fatality. Despite the presence of multiple SAEG crew members near the trench box engaging in various activities, the FSI did not engage crew members and did not assess their training and competency with high arch trench box activities, including disassembly, as required by Trans Mountain's process.
11. This was not the first time that Trans Mountain inspectors failed to verify SAEG's training and competency for trench box activities. A review of all Trans Mountain-supplied FSI daily inspection reports and H&S Lead weekly inspection reports for Spread 1 relating to trench boxes, from when SAEG started construction in December 2019 to shortly after the fatality in October 2020, reveals no evidence of any training or competency assessments for trench box assembly and disassembly work. Similarly, there is no evidence of any audits, assessments and focused inspections verifying that SAEG personnel on Spread 1 were trained and competent to assemble and disassemble trench boxes.
12. On the date of the fatality, Trans Mountain also did not implement its management system process when it failed to ensure that SAEG had a TMEP-approved documented procedure to perform competency assessments that was explicit and systematic, as per Owner Contractual Requirements. Ultimately, a documented, explicit, and systematic SAEG procedure for performing competency assessments was never approved before it was terminated from Spread 1.
13. Further, on the date of the fatality, Trans Mountain did not implement its management system process for supervising the SAEG crew on Shoefly 38a to ensure that they performed trench box disassembly activities in a manner that was safe. Trans Mountain's management system process for supervising SAEG involved, among other individuals, FSIs. FSIs supervised SAEG in accordance with various duties and responsibilities described in Trans Mountain's management system documents, including the HSMP, IMM Program and Inspector's Guideline.
14. On October 27, 2020, an FSI arrived at the worksite shortly before the incident. Despite the presence of SAEG workers immediately next to the trench box, site activity and the fact that work on Shoefly 38a was unscheduled, the FSI did not carry out the supervision required by Trans Mountain's management system process. Among other things, the FSI:
  - stayed in the truck and did not engage with the SAEG crew when it was reasonably apparent that unplanned activities relating to the high arch trench box (that can involve high and very high inherent risks) was likely to occur;
  - failed to ensure, through communicating with the crew, that hazards were being identified and mitigated in relation to high arch trench box and side-boom activities;
  - failed to observe for expected safeguards, which necessarily would have required some degree of engagement with SAEG crew on the contents of their procedure, task assessment or field-level hazard assessments; and

- failed to communicate findings of observations relating to expected safeguards with the SAEG crew.
15. This was not the only instance where FSIs did not supervise trench box disassembly activities on Spread 1. Despite SAEG performing at least 60 trench box operations before the fatality, including disassembly, none of Trans Mountain's TMEP daily and weekly field inspection reports relating to trench boxes describe or address trench box disassembly activities, related hazards and risks, and associated controls.
  16. Based on the above, there are reasonable grounds to believe that, on October 27, 2020, Trans Mountain violated paragraph 6.5(1)(k) of the OPR when it failed to implement its management system process for verifying that Spread 1 Safety Personnel and the SAEG crew on Shoefly 38a were trained and competent and for supervising the SAEG crew who was disassembling the high arch trench box to ensure that they performed their duties in a manner that was safe.

**Relevant Facts:**

**I. BACKGROUND ON TRENCH BOXES**

17. For context with respect to Trans Mountain's obligations to implement its management system process for verifying training and competence, and for supervising workers to ensure safe performance of duties, it is important to examine the use of trench boxes in Spread 1 up to the date of the fatality.
18. By October 27, 2020, Trans Mountain project representatives were aware that trench boxes had been, and were being, used. Approximately 60 trench box activities had occurred on Spread 1 from December 2, 2019 (the start of Spread 1 construction) until the fatality, at which time Spread 1 still had a total of 11 trench boxes in inventory. A portion of these trench box activities involved trench box disassembly.
19. SAEG's assembly and disassembly of trench boxes on Spread 1 involved high to very-high inherent risks:
  - (a) Trench box systems consist of 2 wall panels, two spreaders and ancillary items that, together, weigh upwards of 10,000 lbs;
  - (b) Trench box disassembly requires workers to be proximal to the heavy equipment for tasks such as pin removal;
  - (c) Several types of trench boxes exist. For example, "gravity lock" trench boxes were introduced in 2016 (note the high-arch type of gravity lock trench box was involved in the fatality). Different configurations can involve different disassembly steps;
  - (d) Together, the physical weight of trench box systems, the tasks involved with trench box disassembly, and the interaction or proximity of workers to heavy trench box components and supporting machinery, increases the likelihood of injuries and fatalities due to undesirable events (e.g., struck by or crushed by trench box components). Adequate safeguards or controls – including adequate training, competence and supervision – must be implemented to control for the risks of trench box disassembly to ensure that it can be safely executed;
  - (e) The risks associated with trench boxes can lead to severe injuries or death. The GroundWorks Safety Systems Multilateral Trench Box manufacturer's instruction manual, which applied to the high arch trench box that was involved in the fatality, provides as follows:



**READ MANUAL PRIOR TO INSTALLATION**

Improper use of this system may result in serious injury or death. All personnel working in and around the Trench Box should read this manual thoroughly before use. Failure to perform these tasks as outlined in this manual may result in serious injury or death.



**READ AND UNDERSTAND ALL SAFETY STATEMENTS**

Read all safety decals and safety statements in all manuals prior to use of this system. Know and obey all relevant regional safety regulations, laws, and any other professional guidelines pertaining to system use.

# WARNING!

## FAILURE TO COMPLY WITH MANUFACTURERS INSTRUCTIONS WHEN USING THIS EQUIPMENT MAY LEAD TO INJURY OR DEATH

- (f) These risks were recognized by both Trans Mountain and its contractors after the fatality. As evidenced by entries in Trans Mountain TMEP Unified Hazard Risk Register (UHRR) post-fatality, 5 of 6 contractors rated trench box activities as having high and very-high inherent risks (highlighted in red and orange below):

Risk ID	Consequence Category	Hazard	Risk Description	Inherent Risk	Controls	Qualified Controls	Residual Risk Rating
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. 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	TP: Trench Box JSA TP: Trench Awareness Course (includes trench box assembly/disassembly) for personnel involved in trench box assembly/disassembly and installation/removal	4
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 (sic) disassembly procedure -Manufacturer instruction at the workface -Manufacturer training to supplement supervisors / orversight (sic) of task	TP: Create training for specific task TP: Assessmbly (sic) disassembly procedure TP: Manufacturer instruction at the workface	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 improper handling of Trenchbox	16	Training and competency completed prior to using trench boxes Toolbox / FLHA completed prior to task commencing All workers to review JHA prior to starting task. Adhere to Manufacturers specifications Documented Pre Inspection of Spreader Pins and Side walls prior to Assembling / dismantling trenchbox Competency completed on workers assembling and disassembling (sic) trenchboxes	TP: Training and competency completed prior to using trench boxes TP: Documented Pre Inspection of Spreader Pins and Side walls prior to Assembling / dismantling trenchbox TP: Competency completed on workers assembling and disassembling (sic) trenchboxes	8
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- (g) According to Trans Mountain’s TMEP Risk Matrix that was in place prior to the fatality, these high and very-high inherent risks for trench box activities relate to events that can lead to serious consequences, including extended and disabling lost time injuries and fatalities; and
- (h) Notably, 4 of 6 contractors assigned risk ratings of medium to high for trench box activities even after controls, such as proper adherence to procedures, are implemented.

20. Given the risks involved in trench box activities, it was imperative for Trans Mountain to implement its management system process to verify the training and competence of its contractors and ensure appropriate supervision when trench box activities were known.

**II. REGULATORY REQUIREMENTS WITH RESPECT TO OPR PARA. 6.5(1)(k)**

- 21. The OPR establishes requirements for regulated companies to establish, implement and maintain an explicit, comprehensive and proactive management system.
- 22. 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.
- 23. Paragraph 6.5(1)(k) of the OPR requires Trans Mountain to implement a process for verifying that employees and other persons working with or on behalf of Trans Mountain are trained and competent and for supervising them to ensure that they perform their duties in a manner that is safe. This provision requires two distinct process requirements. One being a process for verifying that employees and other persons working with or on behalf of the company are trained and competent and the other being a process for supervising them while working.
- 24. The OPR does not define “competent”. However, Trans Mountain project documentation defines “competent” as “[h]aving both the required qualifications (i.e., the combination of credentials, role or job specific training, and work experience) and demonstrated ability to perform an assigned role or job proficiently.”
- 25. Trans Mountain’s obligation to implement a management system process in paragraph 6.5(1)(k) involves (i) putting into action the requirements of its process and also (ii) ensuring that the actions are conducted in a manner consistent with, among other things, the OPR’s requirement for a management system that is explicit, comprehensive and proactive. This broad responsibility is acknowledged by Trans Mountain in its HSMP, which states: **“Trans Mountain is responsible under federal and provincial regulations to ensure that its employees, contractors and their personnel are trained and qualified to perform assigned work.”**

**III. RELEVANT FACTS & FINDINGS**

**A. Trans Mountain’s Management System Process to Verify Training and Competence and for Supervision**

26. On the date of the fatality, Trans Mountain had a management system process to verify that persons working with, or on behalf of, the company were trained and competent and for supervising them to ensure that they performed their duties in a manner that was safe. Trans Mountain’s process includes requirements described in various Trans

Mountain TMEP documents including, without limitation, the following:

- a TMEP Training Plan;
- CCAP;
- QAP Manual;
- HSMP and IMM Program;
- Inspector's Guideline; and
- Owner Contractual Requirements.

27. Paragraph 6.5(1)(k) of the OPR requires that Trans Mountain implement its management system process with respect to verifying training and competence and for supervision. As noted above, implementation involves both putting into action the requirements of the management system process and ensuring that the actions are conducted appropriately in a manner consistent with the OPR's requirements.
28. Trans Mountain's management system process was designed to be implemented, at least in part, through contractors who represent Trans Mountain on TMEP, called "Contractors-Owner Representatives". Examples of Contractors-Owner Representatives in relation to Spread 1 include the H&S Lead and FSIs, who were critical to implementing Trans Mountain's management system process for supervising contractors.  
  
**B. On the date of the fatality, Trans Mountain did not implement its management system process for verifying the competence of Spread 1 Safety Personnel when it failed to ensure that their competency assessments had been conducted and documented as required**
29. Under its management system process, Trans Mountain was required to verify that competency evaluations of contractors took place after they were hired and that the evaluations were documented pursuant to the requirements contained in CCAP, the QAP Manual and Owner Contractual Requirements.
30. This requirement applied to Contractors-Owner Representatives, including the following positions who engaged in work relating to Spread 1:
  - Project Manager, hired April 2019;
  - Construction Manager, hired August 6, 2019;
  - 3 Health and Safety Leads, hired between August 2019 – June 2020;
  - 1 General Inspector, hired November 2019; and
  - 4 FSIs, hired between October 2019 – January 2020 (collectively the "**Spread 1 Safety Personnel**").
31. During construction on Spread 1, competency issues arose with respect to certain Spread 1 Safety Personnel. For example:
  - (a) in May 2020, Trans Mountain received photographs of unsafe behaviour displayed by FSIs;
  - (b) in June 2020, a Trans Mountain TMEP Health and Safety Director (**H&S Director**) noted numerous competency concerns, including (i) "low safety maturity" of some members of the Spread 1 Project Management Team (which includes the Project Manager, Construction Manager, H&S Leads and FSIs); (ii) inspectors who did not understand health and safety requirements; (iii) roles between SAEG, as prime contractor, and TMEP inspection team were "misunderstood across the board"; and (iv) nobody from TMEP was challenging SAEG's safety performance; and
  - (c) in August 2020, an investigator retained to examine health and safety culture on Spread 1 also recommended competency-related reviews for supervisors, including FSIs.
32. Despite these identified competency concerns, Trans Mountain could not produce any documented post-hiring competency evaluations for Spread 1 Safety Personnel, including from December 2019 (when SAEG commenced construction on Spread 1) to October 30, 2020 (shortly after the fatality).

33. There are likewise no records demonstrating that Trans Mountain had implemented its management system process to verify that post-hiring competency evaluations for Spread 1 Safety Personnel had been conducted, including through audits, assessments and inspection processes.
34. The absence of documented competency evaluations for FSIs is particularly noteworthy from a safety and supervisory perspective for Spread 1 because there were concurrently questions with SAEG's supervisory competence. For example, in June 2020, Trans Mountain's TMEP H&S Director found "[m]inimal evidence of training and competency verification appears to have occurred with respect to GCC [SAEG] Supervision and Safety personnel."
35. With respect to trench boxes specifically, FSIs on Spread 1 did not receive training on trench box assembly and disassembly activities and did not have the qualifications and demonstrated ability to proficiently supervise these activities.
36. Consistent with this lack of qualification and demonstrated proficiency is the fact that although high arch trench boxes are easily distinguishable from other types of trench boxes, including standard gravity-lock trench boxes, the introduction of this box on Spread 1 did not prompt FSIs to start inspecting assembly and disassembly activities.
37. Trans Mountain recognized this deficiency after the fatality, when it imposed mandatory trench box training for TMEP personnel, including FSIs:

Following the October 27, 2020 incident, Trans Mountain determined that all trench box training (including assembly, operations and disassembly) will be contracted out to a qualified contractor. **This Trench Box Safety Awareness Training will be provided to all TMEP health and safety Inspectors. The training, which is currently underway, will also be provided to other TMEP workers with responsibility for oversight of construction activities including Project Managers, Construction Managers, Construction Coordinators and Craft Inspectors. Trench Box Safety Awareness Training will be added to the TMEP Master Training Matrix and will be mandatory for all TMEP workers with oversight of or working in shoring devices. The contracted training provider will provide completion certificates based on test results for the purpose of qualification tracking.** Trans Mountain's CEO has recently reinforced directly to all inspectors that they have authority and are expected to stop work where they have doubts about any of the competency of management or labour involved in Trench Box assembly, disassembly or usage. [emphasis added]

**C. On the date of the fatality, Trans Mountain did not implement its management system process when it failed to ensure that the training and competence of the SAEG crew disassembling the high arch trench box on Shoefly 38a had been verified**

38. Under its management system process, Trans Mountain was required to verify that SAEG workers were trained and competent to conduct high arch trench box assembly and disassembly activities. Verification involved, among other things, audits, assessments and inspections. Trans Mountain's process required competency verification through visual evaluations and observations, especially where unplanned work is involved.
39. On the date of the fatality, Trans Mountain did not implement this management system process for verifying that the SAEG crew on Shoefly 38a were trained and competent to disassemble a high arch trench box, which was unplanned.
40. On that day, an FSI – whose role, as described in the Inspector's Guideline, was to function as Trans Mountain's representative – attended the Shoefly 38a worksite shortly before the fatality. Despite the presence of multiple SAEG crew members near the trench box engaging in activity, the FSI did not leave his truck to engage crew members and didn't assess their training and competency with high arch trench box activities, as required by Trans Mountain's process.
41. This was not the only instance where FSIs did not verify the training and competence of SAEG personnel with assembling and disassembling trench boxes. A review of all Trans Mountain-supplied FSI daily inspection reports and

H&S Lead weekly inspection reports for Spread 1 relating to trench boxes, from when SAEG started work to shortly after the fatality, reveals no evidence of any training or competency assessments for assembly and disassembly work. There is no evidence that FSIs assessed the training and competency of SAEG personnel for these activities through visual field evaluations and observations, even though approximately 60 trench box operations, including disassembly activities, had taken place up to the date of the fatality.

42. There is similarly no evidence of any audits, assessments and focused inspections verifying that SAEG personnel on Spread 1 were trained and competent to assemble and disassemble trench boxes, as per Trans Mountain's management system process.
43. This absence of any documented visual field evaluations, documented observations, audits, assessments and focused inspections on training and competence of SAEG personnel relating to high arch trench box assembly and disassembly activities is confirmed by Trans Mountain:

**Prior to October 30, 2020 Trans Mountain contractors** (including Trans Mountain inspectors and SAEG personnel) on Spreads 1, 4B and 6 **were not required to obtain specific training, or evaluated for qualifications and competency, specific to trench box operations.** [emphasis added]

44. In contrast, a General Construction Contractor on TMEP Spread 2 requested training from the vendor of a high arch trench box for its crew and an FSI working in Spread 2 participated in the training session and documented the session in a daily inspection report. Despite knowing that this training was available, Trans Mountain's personnel with responsibilities for training and competence did not ensure that similar training was offered to SAEG (and FSIs) throughout TMEP, including on Spread 1.

**D. On the date of the fatality, Trans Mountain did not implement its management system process when it failed to ensure that SAEG had a TMEP-approved documented procedure to perform competency assessments that was explicit and systematic**

45. Under Trans Mountain's management system process, it was required to ensure that SAEG had an approved documented procedure to perform competency assessments that was both explicit and systematic.
46. Approximately 5 months after SAEG commenced work on Spread 1, a TMEP Audit Report: Compliance Audit Spread 1 SA Energy Group dated May 14, 2020, found, as a non-conformance, that SAEG still did not have a documented competency assessment procedure that was explicit and systematic. SAEG was required to develop and implement a corrective action plan to develop a documented procedure to perform competency evaluations.
47. In June 2020 the Spread 1 H&S Director also confirmed that "minimal verification of competency of any of the GCC [SAEG] personnel is found on file."
48. Ultimately, a documented, explicit, and systematic SAEG procedure for performing competency assessments was never approved.

**E. Trans Mountain did not implement its management system process for supervising the SAEG crew on Shoefly 38a to ensure that they performed trench box disassembly activities in a manner that was safe**

**(i) Trans Mountain's management system process for supervising Spread 1 SAEG workers involved FSIs**

49. On the date of the fatality, Trans Mountain had a management system process for supervision whereby FSIs contributed to supervision over Spread 1 SAEG workers, who were also directly supervised by SAEG supervisors. At all relevant times FSIs were expected to function as representatives of Trans Mountain as the entity owning and managing TMEP.
50. FSIs were assigned to support oversight of TMEP personnel and contractors and were in place for day-to-day inspections involving field observations on worksites, and monitoring to ensure various health and safety-related

requirements were met. These oversight, inspection and monitoring activities collectively fall under the ambit of supervision under paragraph 6.5(1)(k) of the OPR.

51. Though FSIs did not necessarily supervise all aspects of activities conducted by SAEG workers, they conducted supervision through oversight, inspection and monitoring of SAEG workers with respect to safety-related matters. In practice, inspectors were expected by TMEP management team and project management team to be in the field at the workplace verifying quality of work completed and influencing and, when required, directing GCCs to meet TMEP specifications. The expectation was “their boots should be as dirty as the contractors.”
52. According to a TMEP Construction Manager, when describing challenges on the project relating to collaborative inspections, “[i]n the beginning, we were told to leave them [SAEG] alone as they were the prime. Now we are supposed to look after them. There are still eggs to be cracked.” A third-party who investigated a May 2020 incident relating to a slide-rail also indicated that, when he investigated, he could not tell who the prime contractor was on site as there was too much control and oversight from Trans Mountain, who was telling SAEG what to do.

**(ii) Trans Mountain’s management system process with respect to FSI Supervision of SAEG Workers**

53. FSIs perform field inspections and contractor oversight in accordance with various duties and responsibilities described in Trans Mountain’s management system documents, including those described in the Trans Mountain TMEP HSMP, including the TMEP IMM Program and TMEP Inspector’s Guideline.
54. According to the documents, Trans Mountain’s process for supervising SAEG workers through FSIs included the following:
  - (a) FSIs were stationed to oversee health and safety compliance of all SAEG worksites. They were responsible for conducting day-to-day observations on SAEG workers and for ensuring compliance to health and safety regulations. Day-to-day findings were communicated to the H&S Lead and any outstanding safety issues were to be communicated by the FSI directly to SAEG for immediate corrective action;
  - (b) FSIs were responsible for conducting various inspections, measurements and monitoring activities including, among other things, (i) daily pipeline safety inspections (to review field work, ensure hazards are identified and mitigated, and that behavioural based safety observations were being conducted); (ii) periodic focused inspections on SAEG programs and procedures; and periodic reviews of SAEG corrective action plans;
  - (c) Daily, weekly and focus inspections had three main purposes: (i) to ensure hazards of field work were being identified and mitigated; (ii) to ensure required safeguards identified in various documents (including those contained in SAEG’s PSSP, regulations, safe work practices, specifications, manufacturer’s instructions etc.) were in place; and (iii) to support construction management / project management personnel in delivering safe project performance; and
  - (d) With respect to ensuring appropriate safeguards during daily inspections, FSIs were required to (the guideline’s wording is “shall”), among other things (i) explicitly identify the source of a safeguard (i.e., a measure taken to protect someone or something or to prevent something undesirable) being measured (e.g., PSSP section, document number, standard, legislation, manufacturers instruction etc.); (ii) explicitly identify the status of safeguard(s) being evaluated; (iii) record safeguards that represent repeat or persistent deficiencies through the TMEP Preventative Action Report process; and (iv) explicitly identify any gaps in TMEP Lifesaving Rules.

**(iii) On the date of the fatality, Trans Mountain failed to implement its management system process to supervise, through an FSI, the SAEG crew to ensure that workers conducted their duties in a manner that was safe**

55. The CER’s analysis of time-stamped video evidence, interviews with the relevant FSI, and examination of an HSE Align Ltd. Incident Investigation Report dated November 27, 2020 (**Final Investigation Report**) indicates the following with respect to what took place on the date of the fatality:

- (a) In and around 13:35, a SAEG Straw directed a SAEG side boom operator to transport the GW high arch trench box to a location on the north portion of SF 38a;
- (b) In and around 14:01, three SAEG workers (other than as indicated in this chronology, no other workers can be observed) dressed in blue coveralls, with high-visibility vests and hardhats, can be seen in video footage walking in the workspace. A side-boom is behind them and has the trench box attached and hoisted in the air, following the workers;
- (c) In and around 14:02, video footage shows the side-boom is now stationary. Two SAEG workers are seen standing beside the side-boom – hands on the load, as it is lowered to the ground on the matting; tag lines are not in use. The trench box is set down on the matting, the flat side panels running north/south and the arch pieces sitting east/west;
- (d) In and around 14:03, video footage shows a SAEG worker in blue coveralls and high-visibility vest standing on the back of a white truck, appearing to reach towards a ladder;
- (e) In and around 14:03:38, a dark colored Chevrolet pickup drives onto the site. The driver of the truck is a TMEP FSI acting as a representative of Trans Mountain;
- (f) When the FSI arrives, the SAEG worker jumps down off the white truck. One of the two SAEG workers walks away from the trench box and side-boom while the other stays next to the trench box and side-boom;
- (g) In and around 14:03:45, the FSI stops the truck on the site, facing the white truck. During this time, one SAEG worker remains next to the trench box and side-boom, while the other SAEG worker who had jumped off the white truck walks towards the trench box. It is unclear whether the trench box was connected to the side-boom's hook, which is directly over and very near to the top of the trench box. Slings can be seen hanging from the trench box. No other active work activities are taking place within the vicinity of the trench box area where the workers are located;
- (h) In and around 14:03:53, the FSI drives the truck towards the side-boom and trench box where two workers are present. One of the workers bends down and appears to reach for items on the ground next to the trench box. The FSI stops nearer to the side-boom and trench box at 14:04:09;
- (i) Together, the proximity of multiple SAEG workers to the trench box, their conduct at the time (including two individuals staying next to the trench box), the proximity of the side-boom to the trench box, the presence of slings attached to the trench box, and the lack of any other work activities in the vicinity all suggest that trench-box related work was taking, or was going to take, place;
- (j) At all times the FSI stays in the truck. The FSI did not have any interactions with the SAEG workers;
- (k) By 14:06:52, the FSI has left the site. Based on video footage, the FSI remained on site for at most 3 minutes 14 seconds before leaving for another work location; and
- (l) In and around 14:23:47, the trench box falls, striking [REDACTED].

56. Based on the above, Trans Mountain failed to implement its management system as documented in its HSMP, IMM Program and TMEP Inspector's Guideline to supervise SAEG workers through FSIs (who function as representatives of Trans Mountain) to ensure that they conducted trench box activities in a manner that was safe.
57. Specifically, Trans Mountain failed to implement its supervisory process when the FSI, its representative:
- (a) failed to engage SAEG workers when it was reasonably apparent that activities relating to the trench box could occur (that can involve high and very high inherent risks) and that was a work scope change for that day. FSIs received "daily activity reports" every day by email, containing scheduled work, at 7:00 am. Based on the

activities that were taking place when the FSI was on site and the fact that no work had been scheduled on Shoefly 38a based on the daily toolbox meeting record that had been prepared for that day, the FSI should have followed Trans Mountain's process when unplanned activities were observed. In particular the FSI should have followed Trans Mountain's process respecting unplanned work, which involved:

- pausing the work;
- engaging in general inspection of any observed unplanned activities;
- ensuring all SAEG documentation had been reviewed and referenced (Project Specific Safety Plan, Job Hazard Analyses, Task Analysis Safety Cards, Field Level Risk Assessments, Hazard Assessments, toolbox talks, damage prevention checklist, etc.), complete with signatures;
- ensuring that the SAEG workers understood the tasks and that there are documents and/or procedures readily available to review at the workplace;
- ensuring that competency evaluations have been completed for those tasks requiring evaluations; and
- ensuring that the task is not a violation of Trans Mountain "Life Saving Rules";

- (b) failed to ensure, through engaging with SAEG workers, that hazards were being identified and mitigated in relation to trench box and side-boom activities. Had the FSI done so, he would have learned that there had been no discussion on hazard identification or field level hazard assessment had been done;
- (c) failed to observe for expected safeguards, which necessarily required some degree of engagement with SAEG workers on the contents of their procedure, task assessment or field-level hazard assessments. Had the FSI checked for completion of a Job Hazard Analysis and/or a Task Analysis Safety Card with respect to trench box disassembly, he would have learned that none had been completed. He could have also learned that manufacturer instructions with respect to the trench box were not readily available. When asked about why he did not engage with SAEG workers, the FSI indicated that while he engaged with the workers when he was in the field, he didn't feel obligated to do so; and
- (d) failed to communicate findings of observations relating to expected safeguards with the SAEG workers. At the time, the FSI did not know who was in charge when he arrived on site and was unaware that the SAEG foreman – who would have supervised the labourers – was not present.

58. Trans Mountain's failure to implement its management system process to supervise disassembly of trench boxes, through FSIs, was not uncommon. As noted above, FSIs on Spread 1 did not record a single trench box disassembly observation in daily field inspection reports while SAEG was General Construction Contractor. When Spread 4 was examined for contextual reasons, there was also a complete absence of FSI observations describing, or addressing, trench box disassembly.

59. The absence of FSI observations relating to trench box disassembly activities on Spread 1 and 4b is also connected to an absence of observations relating to trench box disassembly-specific controls and safeguards that should have been documented. For example, none of the FSI observations between December 2, 2019 and October 30, 2020 for Spread 1 and 4b mention the following controls or mitigations with respect to trench box disassembly risks, such as:

- adequate SAEG supervision of trench box disassembly activities;
- appropriate training relating to trench box disassembly;
- access to, and implementation of, appropriate JHAs, TASCs and manufacturer instructions relating to trench box disassembly; and
- completion of trench box inspection checklists (e.g. GroundWorks Trench Box Inspection Checklists or equivalent).

60. The absence of FSI observations on hazards, risks and controls relating to trench box disassembly activities during the entire period of SAEG's work on Spread 1, and on October 27, 2020, was significant given the existence of general safety-related issues with trench boxes / shoring on Spread 1, including the following:

- (a) There were concerns with the high arch type of trench box that was involved in the fatality, with evidence that various SAEG personnel were uncomfortable and lacked experience with them;

- (b) The trench box supplier had offered to provide trench box training and learning sessions to SAEG on several occasions, but SAEG never obtained them for its personnel nor did Trans Mountain require them;
- (c) SAEG exchanged trench boxes with its supplier at least twice, in one instance indicating they were not working properly, even though in both cases the trench boxes were inspected by the supplier and deemed to be in safe operating condition. Notably, in one of the exchanges in June 2020, the trench boxes had been returned to the supplier in an unusual disassembled state, which suggested that SAEG workers were disassembling them incorrectly. As described above, there are no documented FSI observations relating to the unusual disassembled trench boxes;
- (d) Three incidents previously occurred in connection with trench boxes and shoring equipment on Spread 1:
- i. In May 2020, a SAEG crew installed a slide-rail system (a type of shoring device, with associated activities ranked by SAEG as medium to high-risk). The system sank approximately 2.5 meters. A 52-foot pile was driven 50 feet into the ground and the slide-rail system was to be secured to the pile. In and around the time that this work was taking place, SAEG personnel also separately violated several SAEG and TMEP safety program elements, including "Life Saving Rules" relating to working at heights, bypassing safety controls and a worker riding in an excavator bucket. According to a third-party investigation of the incident, a causal factor that may have contributed or caused the incident was "supervision accepting unnecessary risk". The investigator gives 6 examples where TMEP supervisors permitted work to take place without necessary hazard controls:

The images surrounding TMEP Incident #319 present a vivid image where SAEG and TMEP Supervisors are allowing work to take place without necessary hazard controls in place. Examples included but are not limited to:

- performing work (sic) at heights (6 feet) without proper fall protection in place
  - working in a trench with soil sloughing into the work area (classified as "likely to crack or crumble")
  - allowing craft workers to remove Personal Protective Equipment (including face coverings) when required
  - not updating or reviewing the necessary documentation when work conditions change
  - using equipment that is not rated for the intended use (chains – see TMEP Incident #300)
  - workers using equipment with manufacturer-installed safeguards removed (second handle on grinders). [emphasis added]
- ii. Trans Mountain's TMEP Health and Safety Director described the event as involving "fatal risks" and attributing the conduct of the TMEP inspections team to significant cultural, organizational and systemic issues:

#### **8. INCIDENT REVIEW (TRENCH BOX FATAL RISK PHOTO)**

**The event illustrated in the photo depicting several GCCs personnel exposed to fatal risks and TMEP inspections team observing and accepting of the condition is certainly a worrying picture.** Typically, when one person is observed breaking a rule, it can be determined that it is the action of the individual, however, **when we see so many personnel appearing to accept terrible conditions that given the experience and training of those people, this can only be explained as a site with significant cultural, organizational and systemic issues.** [emphasis added]

- iii. The resulting report stemming from this incident spoke to "*inadequate education and training for workers in their roles.*" Other findings identified that "*Spread 1 supervisors from SAEG and TMEP were allowing*

*work to take place without the necessary hazards or controls in place. This could be attributed to a lack of training and competency in health and safety.*” In addition, the report raised trench box-related hazards – “*no training in place or hazard controls related to the installation of a trench box/slide-rail system. This is a gap as there was evidence that the trench box was initially installed incorrectly.*” Despite these findings, up to October 30, 2020, Trans Mountain contractors (including Trans Mountain inspectors and SAEG personnel) on Spreads 1, 4B and 6 were not required to obtain specific training, or evaluated for qualifications and competency, specific to trench box operations;

- iv. In and around June 16, 2020, SAEG workers attempted to assemble a high arch trench box on Shoefly 18 of Spread 1. Some of the crew members had no previous experience working on high arch trench boxes and the workers watched a YouTube video, which at least one crew member found confusing. Two attempts were made to assemble the high arch trench box and **each time one of the 4000-pound side panels fell from the struts and onto the ground.** According to an FSI-completed daily inspection report (the same FSI who attended, and departed, the worksite prior to the fatality), the FSI arrived after the trench box assembly activities took place and did not observe the crew assembling the trench box and the near-miss; and
- v. In and around October 3, 2020, the same SAEG crew involved in the fatality had also attempted to assemble a high arch trench box on Shoefly 38a. There is video evidence confirming that the trench box was not assembled to manufacturer’s specifications. During assembly, there was a sling failure and, as a result, an approximately 15,000-pound trench box fell from a height of approximately 1 meter. SAEG did not report the incident. According to an FSI-completed Daily Inspection Report (the same FSI who attended, and departed, the worksite prior to the fatality), the FSI arrived after the trench box assembly activities and did not observe the crew assembling the trench box and the near-miss.

61. It is also significant that the lack of supervision for trench box assembly and disassembly activities on Spread 1 took place within a wider context of safety culture issues pertaining to FSIs, which could have affected Trans Mountain’s implementation of its management system. One TMEP FSI indicated, with respect to another incident on Spread 1, that “[w]e were coached to see no evil, hear no evil, report no evil. Do not report. We are here as an oversight.” There is also evidence from June 2020 that “nobody from TMEP challenges the GCC [SAEG] safety performance,” “GCC bullying the Safety Inspection Team” to the point personal safety outside of work was a concern, there was a lack of confidence in issuing safety NCRs (Non-Conformance Reports) due to lack of support from Trans Mountain’s TMEP Project Manager and Construction Manager, there was concern with retaliation; and lack of support from non-safety TMEP Inspectors who did not support the safety team or act when they observed issues.

#### IV. CONCLUSIONS

62. On the date of the fatality, Trans Mountain failed to:
- (a) implement its management system process for verifying the competence of Spread 1 Safety Personnel when it did not ensure that competency evaluations had been performed and documented as required;
  - (b) implement its management system process for verifying the training and competence of the SAEG crew disassembling the high arch trench box on Shoefly 38a had been verified as per CCAP, HSMP and the Inspector’s Guideline;
  - (c) implement its management system process for verifying training and competency of SAEG personnel on Spread 1 when it did not ensure that SAEG had a TMEP-approved documented procedure to perform competency assessments that was explicit and systematic, as required by Owner Contractual Requirements; and
  - (d) implement its management system process for supervising the SAEG crew on Shoefly 38a to ensure that they performed trench box disassembly activities in a manner that was safe.

Based on evidence received with respect to the CER’s compliance activities relating to the fatality, and the facts described above, there are reasonable grounds to believe that, on October 27, 2020, Trans Mountain violated paragraph 6.5(1)(k) of the OPR.

**Section Three – Penalty Calculation / Calcul des sanctions**

<b>Baseline Penalty (Gravity Level = 0) / Pénalité de base (côte de gravité = 0)</b> <i>Refer to AMP Regulations, Subsection 4(1) / Voir le Règlement, paragraphe 4(1))</i>									
<b>Category / Catégorie</b>	<b>Individual / Personne physique</b>			<b>Any Other Person / Autre Personne</b>					
<b>Type A</b>	<input type="checkbox"/> \$1,365			<input type="checkbox"/> \$5,025					
<b>Type B</b>	<input type="checkbox"/> \$10,000			<input checked="" type="checkbox"/> \$40,000					
<b>Applicable Gravity Value / Côte de gravité globale applicables</b> <i>(Refer to AMP Regulations, Subsection 4(2) / Voir le Règlement, paragraphe 4(2))</i>				<b>Gravity Level</b>					
				<b>Mitigating / Atténuer</b>		<b>Aggravating / Aggravantes</b>			
				-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 from 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"/>	--
<input checked="" type="checkbox"/> Negligence on part of person who committed violation / Négligence de la part de la personne ayant commis la violation				--	--	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	--
<p>There is evidence that Trans Mountain was negligent (i.e., did not exercise due diligence) in complying with regulatory requirements with respect to implementing its process to verify the training and competence of its contractors and supervising them to ensure that they performed their duties, including assembling and disassembling trench boxes, in a manner that was safe. This evidence is described above and includes, without limitation, the following:</p> <ul style="list-style-type: none"> <li>• Trans Mountain failed to implement its management system process to verify the competence and training of Spread 1 Safety Personnel from December 2019 – October 2020 and, concurrently, no documented competency evaluations took place during this time. The lack of competency assurance with respect to FSIs is especially significant since Trans Mountain TMEP personnel were also aware in June 2020 that there was minimal evidence of training and competency verification with respect to SAEG's supervision and safety personnel;</li> <li>• Prior to the fatality, Trans Mountain contractors (including Trans Mountain inspectors and SAEG personnel) on multiple spreads – including Spreads 1, 4B and 6 – were not required to obtain specific training, or be evaluated for qualifications and competency, specific to trench box operations. Spread 1 FSIs were neither trained nor competent to supervise trench box assembly and disassembly activities;</li> <li>• Trans Mountain failed to implement its management system process to verify the competence and training of SAEG workers who, on the day of the fatality, were neither trained nor experienced with conducting disassembly on the high arch trench box.</li> <li>• Trans Mountain failed to ensure that SAEG developed an approvable documented procedure for performing competency assessments on SAEG contractor group personnel. In so doing, Trans Mountain failed to implement its own management system process, including the Owner Contractual Requirements. In June 2020 Trans Mountain H&amp;S Director was aware that there was minimal verification of competency of any of the SAEG personnel found on file. Moreover, Trans Mountain allowed SAEG and its contractor group to continue working on site despite</li> </ul>									

the absence of a documented procedure for competency assessments and minimal competency verifications, which increased risk that workers were not competent; and

- Trans Mountain repeatedly failed to implement its management system to supervise SAEG personnel with respect to trench box disassembly activities. On the date of the fatality the FSI, a Trans Mountain representative, should have, among other things, recognized that the trench box activities were unplanned but did not do so. The FSI also should have reasonably engaged the workers to assess hazards, mitigations, and worker competency but did not do so.

The lack of due diligence is particularly significant given the safety and culture issues on Spread 1 including, without limitation, those described above and highlighted below:

- Trans Mountain was unaware of two unreported near-miss incidents involving trench box assembly on Spread 1 (described above), yet these were missed by FSIs, who do not appear to have prioritized – or even recognized – the observation of trench box assembly activities and missed the near-misses that could have given rise to critical and/or extreme consequences and learnings to prevent other incidents;
- The fatality involved a high arch trench box that was different than other types of trench boxes. Although high arch trench boxes are easily distinguishable from other types of trench boxes, including standard gravity-lock trench boxes, the change in style did not prompt FSIs to conduct increased inspections with respect to assembly and disassembly activities, both from a quantitative and qualitative perspective; and
- The General Construction Contractor on Spread 2 requested and obtained training on high arch trench boxes in August 2020. Despite the attendance of an FSI, and the creation of a daily field inspection report with respect to the training, Trans Mountain did not exercise due diligence to ensure that the training is provided to other contractors on other spreads utilizing trench boxes prior to the date of the fatality.

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

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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.

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, which included discussion of critical and contributing factors. The CER notes that the investigation report omits the arrival and departure of the FSI shortly before the fatality took place (as described above) and does not examine whether it was a critical or contributing factor in respect of the fatality.

In addition, 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 0 is appropriate in the circumstances.

After becoming aware of the violation, promptly reported 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 applied

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

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	--
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Following the fatality on 27 October 2020, 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 these were in response to the specified measures of inspection officer order RRW-001-2020 or notices of non-compliances, although Trans Mountain had taken various voluntary actions with respect to trench assembly/disassembly across the TMEP.

According to Trans Mountain, the following system improvements were also made:

- Trans Mountain required mandatory Trench Box Safety Awareness;
- Training for all individuals identified in overseeing TMEP trench box activities or that are working in and around trench boxes;
- Trench Box Safety Awareness Training has been added to the TMEP Master Training Matrix and is delivered to personnel by qualified training providers;
- Trans Mountain developed specific requirements and rules to be followed by Trans Mountain personnel and contractors when using shoring equipment, including trench boxes, and to be utilized for any field training activity;
- Spread 1 FSI and H&S Lead competency assessments were completed post-fatality; and
- Focused inspections for training and competency were executed.

Trans Mountain also developed a CAPA with the following items:

- TMEP to validate compliance to its Contractor Competency Assurance Plan (CCAP) for its Inspectors, Construction Managers and Project Managers. Trans Mountain indicated that requirements were updated and training were to be completed prior to re-mobilization following the safety stand-down;
- TMEP to provide additional training to its Project Management Team personnel to ensure clarity with respect to incident reporting requirements, stop work authority, and hazard identification and reporting for all inspection personnel. Trans Mountain indicated that training material was completed and training was on-going as construction continued to re-start and as required;
- TMEP to provide trench box training to Inspectors working within or directly involved in oversight of contractors using trench boxes or similar devices. As described above, trench box safety awareness training was provided;
- TMEP to create and issue an Inspection form for trench box/shoring device use, assembly and disassembly. Trans Mountain developed a TMEP Health and Safety Focus Inspection specific to trench box activities in November 2020.

Trans Mountain also indicates that it has taken steps to implement its process to verify the training and competence of General Construction Contractors after the fatality. For example, Trans Mountain has implemented a system for which contractors report monthly their status of training and competency evaluations. The data submitted is analyzed by Trans Mountain and a scorecard is issued detailing their compliance. The scorecard is aligned with Trans Mountain's internal KPI of 90% of training and competency. Scorecards are reviewed at a monthly sponsor meetings and shared with the Trans Mountain Executive. Contractors are also required to report the reasons for any outstanding training/competencies and corrective actions to address deficiencies.

In addition to the monthly training/competency reporting, Trans Mountain indicates that it continued to execute focus inspections for training and competency. For example, Trans Mountain's inspection team conducted 82 focus inspections for competency between January 1, 2021 to April 24, 2022. Of 82 inspections, 2.9% of the questions were answered as noncompliant. A total of 433 Observations and Hazard IDs were documented by inspectors on competency, with 400 positive observations and 33 negative observations.

Field Inspections performed since January 2021 show some improvement in training as indicated above. However, there were some observations in field inspections which indicate the need for ongoing improvements to verify training and competence. Staff is of the view that field verification of competence was not being carried out thoroughly. In some instances, trade specific inspectors were carrying out predominantly trade specific duties with limited focus on worker safety. Field interviews with most craft or trade inspectors showed inadequate verification of safeguards. Examples include Trans

Mountain inspectors not aware of hazards in proximity to high voltage lines (CV2223-092), inspectors unaware of the integrity of an excavation (CV2122-137, and CV2223-101) and requirements for work on asbestos coating (CV2122-098).

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

<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 applied

<input checked="" type="checkbox"/> Any other aggravating factors in relation to risk of harm to people or 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;
- 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;
- Lack of FSI training and competence to supervise trench box assembly and disassembly activities on Spread 1 increased the risks with respect to Spread 1 trench box assembly and disassembly activities, particularly given their significant roles and responsibilities with respect to health and safety assurance and the prevalence of trench box activities on Spread 1;
- According to Trans Mountain’s Final Investigation Report, lack of SAEG crew training and experience was identified as an immediate / direct cause of the fatality and Trans Mountain’s implementation of its management system process to verify their training and competence, including through FSI inspections, could have potentially contributed to avoiding or mitigating the hazard associated with trench box activities;
- Concerns with lack of training and competence with respect to both Trans Mountain’s TMEP personnel and SAEG personnel were previously raised. For example, a Prime Essential Safety Culture Assessment report of August 18, 2020 (**Prime Essential Report**) speaks to “*inadequate education and training for workers in their roles*”. Other findings identified that “*Spread 1 supervisors from SAEG and TMEP were allowing work to take place without the necessary hazards or controls in place. This could be attributed to a lack of training and competency in health and safety.*” In addition, the report raised trench box-related hazards – “*no training in place or hazard controls related to the installation of a trench box/slide-rail system. This is a gap as there was evidence that the trench box was initially installed incorrectly.*” Yet up to October 30, 2020, Trans Mountain contractors (including Trans Mountain inspectors and SAEG personnel) on Spreads 1, 4B and 6 were not required to obtain specific training, or evaluated for qualifications and competency, specific to trench box operations;
- The lack of Trans Mountain supervision with respect to trench box disassembly activities. It is notable that FSI daily inspection reports up to the date of the fatality did not contain any observations with respect to trench box disassembly activities, including associated hazards, risks and controls;
- This lack of supervision was significant. Among other reasons, it is notable that the Prime Essential Report identified several issues relating to Spread 1 that were still present on the day of the fatality, including continuing unreported near-misses, violation of Trans Mountain TMEP Life Saving Rules, and a lack of Task Analysis Safety Cards being used. Overlapping issues (e.g., near-misses, lack of a Task Analysis Safety Card) were raised in the Final Investigation Report in connection with the fatality and there was an opportunity for them to have been mitigated had there been appropriate FSI supervision;

- Trans Mountain compliance audit of SAEG in connection with Spread 1 work revealed non-compliances 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 training and competency requirements are implemented, and that workers are supervised to ensure work is being performed in a safe manner; and
- Trans Mountain's affiliate had operational procedures (i.e., 3.10.1 Standard, 513 - Excavating, Trenching and Shoring and 214 – Entering Excavations and Trenches) that identified specific training requirements and qualifications for working with trench boxes, which were not applied to the TMEP.

Despite this awareness of issues involved in the near-miss incidents that were the subject of the Prime Essential report, reporting issues, violation of life saving rules and poor safety culture practices were still present at the time of the fatality.

<b>Total Gravity Value / Côte de gravité globale</b> <i>(adjustments made for gravity values in B) based on mitigating or aggravating factors applied)</i>	<b>+4</b>
<b>Daily Penalty / Sanctions quotidiennes</b> <i>(baseline penalty adjusted for the final gravity level / Pénalité de base d'après la côte de gravité)</i>	<b>\$ 88,000</b>
<b>Number of Days of Violation / Durée de la violation</b> (If more than one day, justification must be provided / si plus d'une journée, prière de justifier) Not Applicable	<b>1</b>
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.

<b>Total Penalty Amount / Montant total de la pénalité</b>	<b>\$ 88,000</b>
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#### Section Five – Due Date / Date limite

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

<b>Due Date / Date limite</b>	<b>6 December, 2022</b>
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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 was 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 was 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 0A8

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 0A8

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