



Canada Energy
Regulator

Régie de l'énergie
du Canada

Suite 210, 517 Tenth Avenue SW
Calgary, Alberta
T2R 0A8

Final Audit Report

Foothills Pipe Lines Ltd. (F115)

Damage Prevention

CV2324-227

OF-Surv-OpAud-F115 – 2023-2024

19 September 2023

Executive Summary

The Canada Energy Regulator (**CER**) expects pipelines and associated facilities within the Government of Canada's jurisdiction to be constructed, operated, and abandoned in a safe and secure manner that protects people, property, and the environment. To this end, the CER conducts a variety of compliance oversight activities, such as audits.

Section 103 of the *Canadian Energy Regulator Act* (S.C. 2019, c.28, s.10) (**CER Act**) authorizes inspection officers to conduct audits of regulated companies. The purpose of these audits is to assess compliance with the CER Act and its associated Regulations.

The purpose of operational audits is to ensure that regulated companies have established and implemented both a management system and its associated programs, as specified in the *Canadian Energy Regulator Onshore Pipeline Regulations* (SOR/99-294) (**OPR**). This audit was modified and only assessed the implementation of the Foothills Damage Prevention Program; the established component was assessed in 2022/23.

The CER conducted a Damage Prevention operational audit of Foothills Pipe Lines Ltd. (**Foothills**) between 12 April 2023 and 22 June 2023.

In 2022/23 the CER audited TC Energy's Damage Prevention Program and management system. Upon receiving the audit notification letter, Foothills communicated that the same management system that was audited the previous year also governs the Foothills Damage Prevention Program. As a result, the CER elected to conduct a gap assessment of the management system to confirm they were the same and narrowed the scope of the Foothills audit to focus on implementation only for audit protocols AP01-10. AP11 was a new audit protocol, added in 2023/24 and therefore was not assessed the previous year. The requirements for AP11 were assessed for both the establishment and implementation of the protocol. The modified objectives of this audit assessed whether the auditee's Damage Prevention Program is:

- governed by the same management system and program as audited in 2022/23.
- implemented by Foothills Pipe Lines Ltd. for AP 01-10; and,
- established and implemented for AP11.

Of 11 audit protocols, all 11 were deemed no issues identified. There were no non-compliant audit protocols identified during this audit. Table 1 in the report summarizes the audit findings. Detailed assessments can be found in Appendix 1. All findings are specific to the information assessed at the time of the audit and within the audit scope.

Given there were no issues identified by the auditors with any of the company's responses to the audit protocols, information requests, or during interviews, no further action is required by Foothills.

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1.0 Background

1.1 Introduction

The Canada Energy Regulator (**CER**) expects pipelines and associated facilities within the Government of Canada's jurisdiction to be constructed, operated, and abandoned in a safe and secure manner that protects people, property, and the environment.

Section 103 of the *Canadian Energy Regulator Act* (S.C. 2019, c.28, s.10) (**CER Act**) authorizes inspection officers to conduct audits of regulated companies. The purpose of these audits is to assess compliance with the CER Act and its associated Regulations.

The purpose of operational audits is to ensure that regulated companies have established and implemented both a management system and its associated programs, as specified in the *Canadian Energy Regulator Onshore Pipeline Regulation* (SOR/99-294) (**OPR**). This audit was modified and only assessed the implementation of the Foothills Damage Prevention Program; the established component was assessed in 2022/23.

The CER conducted a Damage Prevention operational audit of Foothills Pipe Lines Ltd. (**Foothills**) between 12 April 2023 and 22 June 2023.

In 2022/2023 the CER audited TC Energy's management system documents for its damage prevention program. Upon receiving the audit notification letter, Foothills communicated that the same management system that was audited the previous year also governs the Foothills Damage Prevention Program. As a result, the CER elected to conduct a gap assessment of the management system to confirm they were the same and narrowed the scope of the Foothills audit to look at implementation only for audit protocols. AP01-10; AP11 was a new audit protocol for 2023/24 and therefore was reviewed to assess it both for its establishment and implementation.

The modified objectives of this audit assessed whether the auditee's Damage Prevention program is:

- governed by the same management system and program as audited in 2022/23.
- implemented by Foothills Pipe Lines Ltd. for AP 01-10; and
- established and implemented for AP11.

1.2 Description of Audit Topic

This audit focuses on the auditee's Damage Prevention program, for several reasons:

- Damage Prevention regulations came into force in 2016 as a tool to support the safe execution of activities occurring near a pipeline;
- damaged pipelines pose a significant hazard to the safety of people, property, and the environment; and,
- several incidents of third-party damage to pipelines have occurred in the last few years which have resulted in situations with the potential for high severity consequences .

Section 47.2 of the OPR requires companies to develop, implement, and maintain a Damage Prevention program that anticipates, prevents, manages, and mitigates damage to its pipeline. Thus, this audit stream assesses activities relating to:

- depth of cover;
- identifying pipeline locations;
- company liaison/ education activities aimed at potential groups that conduct activities near pipelines including: contractors, municipalities, and landowners;

- monitoring and surveillance; and
- response to notifications.

Audit Protocols (AP) 01-10 of this audit focused solely on the implementation of the Damage Prevention Program while the requirements for AP11 were assessed for both the establishment and implementation of the protocol. The CER evaluated a concordance table of the management system and program documents that were audited in 2022/23. It was determined that the Foothills Pipe Lines Damage Prevention Program was the same program that was audited by the CER the previous year. The CER conducted interviews and document reviews of all records and activities to ensure the program was implemented.

1.3 Company Overview

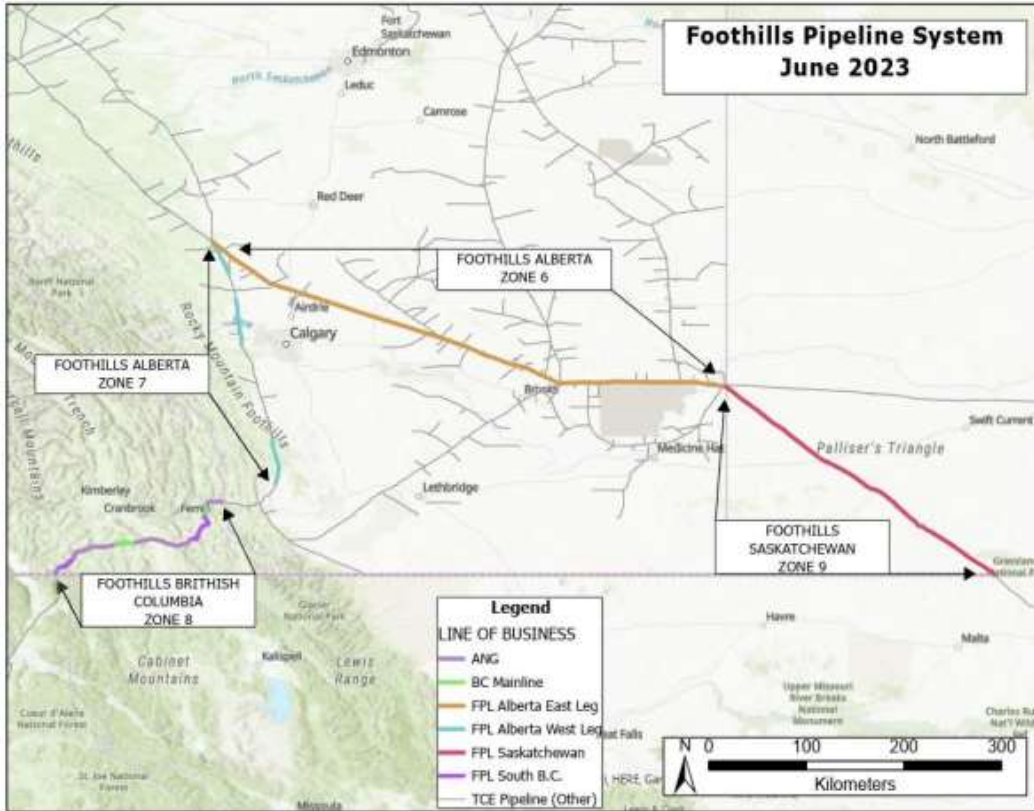
The Foothills pipeline system transports natural gas produced in the Western Canadian Sedimentary Basin and to markets in Alberta, British Columbia, and Saskatchewan, as well as the United States. The pipeline commenced operations in 1981. CER regulated assets include approximately 1250 km of operating pipeline and various auxiliary infrastructure.

The Foothills pipeline receives natural gas from an interconnect with the NOVA Gas Transmission Ltd. system near Caroline, Alberta, and other interconnection points further south.

Key points on the Foothills system include:

- Monchy – export interconnect with the Northern Border Pipeline at the Canada U.S. border near Monchy, Saskatchewan. Northern Border supplies markets in the mid-continent U.S. and Chicago.
- Kingsgate – export interconnect with the Gas Transmission Northwest Pipeline (**GTN**) at the Canada-U.S. border near Kingsgate, British Columbia. GTN supplies markets in the Pacific Northwest, California and Nevada.

The map below depicts the company's CER regulated assets.



2.0 Objectives and Scope

The modified objectives of this audit assessed whether the auditee’s Damage Prevention program is:

- governed by the same management system and program as audited in 2022/23.
- implemented by Foothills Pipe Lines Ltd. for AP 01-10; and,
- established and implemented for AP11.

The table below outlines the scope selected for this audit.

Table 1. Audit Scope

Audit Scope	Details
Audit Topic	Damage Prevention
Lifecycle Phases	<input checked="" type="checkbox"/> Construction <input checked="" type="checkbox"/> Operations <input checked="" type="checkbox"/> Abandonment

Audit Scope	Details
Section 55 Programs	<input type="checkbox"/> Emergency Management <input type="checkbox"/> Integrity Management <input type="checkbox"/> Safety Management <input type="checkbox"/> Security Management <input type="checkbox"/> Environmental Protection <input checked="" type="checkbox"/> Damage Prevention
Time Frame	Not Applicable

3.0 Methodology

The auditors assessed compliance through:

- document review;
- record sampling; and
- interviews.

The list of documents reviewed, records sampled, and the list of interviewees are retained on file with the CER.

An audit notification letter was sent to the company on 12 April 2023 advising the company of the CER's plans to conduct an operational audit. The lead auditor provided the audit protocol and initial information request to the company on 13 April 2023 and followed up on 14 April 2023 with a meeting with the company staff to discuss the plans and schedule for the audit. Document review began on 29 May 2023 and interviews were conducted between 12 June 2023 and 21 June 2023.

In accordance with the established CER audit process, the lead auditor shared a pre-closeout summary of the audit results on 22 June 2023. Since there were no non-compliances identified during this audit, the pre-close out meeting became the close out meeting.

4.0 Summary of Findings

The lead auditor has assigned a finding to each audit protocol. A finding can be either:

- No Issues Identified (non-compliances) were identified during the audit, based on the information provided by the company, and reviewed by the auditor within the context of the audit scope; or
- Non-compliant – The company has not demonstrated that it has met the legal requirements. A CAPA Plan shall be developed and implemented to resolve the deficiency.

All findings are specific to the information assessed at the time of the audit, as related to the audit scope.

The table below summarizes the finding results. See [Appendix 1: Audit Assessment](#) for more information.

Table 2. Summary of Findings

Audit Protocol (AP) Number	Regulation	Regulatory Reference	Topic	Finding Status	Finding Summary
AP-01	OPR	47.2	Damage Prevention Program	No Issues Identified	The records provided by Foothills and the results of the interviews serve as evidence that Foothills has implemented and maintained a Damage Prevention program that anticipates, prevents, manages and mitigates damage to its pipeline.
AP-02	OPR	6.5(1)(c)	Establish and implement a process for identifying and analyzing hazards	No Issues Identified	The records provided by Foothills and the results of the interviews serve as evidence that Foothills has identified and analysed all hazards and potential hazards.
AP-03	OPR	6.5(1)(f)	Establish and implement a process for developing and implementing controls	No Issues Identified	The records provided by Foothills and the results of the interviews serve as evidence that Foothills has developed and implemented controls to prevent, manage and mitigate the identified hazards, potential hazards and risks and for communicating those controls to anyone who is exposed to the risks.
AP-04	OPR	6.5(1)(i)	Establish and implement a process for identifying and managing change	No Issues Identified	The records provided by Foothills and the results of the interviews serve as evidence that Foothills has identified and managed any change that could affect safety, security or the protection of the environment, including any new hazard or risk, any change in a design, specification, standard or procedure and any change in the company's organizational structure or the legal requirements applicable to the company.

Audit Protocol (AP) Number	Regulation	Regulatory Reference	Topic	Finding Status	Finding Summary
AP-05	DPR-O	16(b)	Damage Prevention Program – Minimum Content – Monitoring – Change in Land Use	No Issues Identified	The presentation of the activities and records serve as evidence of Foothills' comprehensive monitoring of land use changes, fulfilling the requirements outlined in the audit protocol.
AP-06	DPR-O	16(c)	Damage Prevention Program – Minimum Content – Monitoring – Change in Land Owner	No Issues Identified	The presentation of the activities and records serve as evidence of Foothills' comprehensive monitoring of land ownership changes, fulfilling the requirements outlined in the audit protocol.
AP-07	DPR-O	16(f)	Damage Prevention Program – Minimum Content – Managing Requests for Consent	No Issues Identified	The presentation of the activities and records serve as evidence that Foothills has implemented a process for managing requests for the consent to construct a facility across, on, along or under a pipeline, to engage in an activity that causes a ground disturbance within the prescribed area or to operate a vehicle or mobile equipment across the pipeline fulfilling the requirements outlined in the audit protocol.
AP-08	OPR	6.5(1)(m)	Establish and implement a process for internal and external communication of information	No Issues Identified	Foothills has demonstrated communication processes, both internally and externally, in compliance with regulatory requirements and the dissemination of information related to safety, security, and environmental protection. The integration of the communication process within the Damage Prevention Program, along with the utilization of tools, platforms, and outreach methods.

Audit Protocol (AP) Number	Regulation	Regulatory Reference	Topic	Finding Status	Finding Summary
AP-09	OPR	6.5(1)(r)	Establish and implement a process for internal reporting of hazards and for taking corrective actions	No Issues Identified	The records provided by Foothills and the results of the interviews serve as evidence that Foothills has reported hazards, potential hazards, incidents and near-misses and has conducted investigations leading to corrective and preventive actions in accordance with the requirements set out in their guidance documents.
AP-10	OPR	6.5(1)(u)	Establish and implement a process for inspecting and monitoring company activities for effectiveness	No Issues Identified	The records provided by Foothills and the results of the interviews serve as evidence that Foothills has implemented a process for inspecting and monitoring the company's activities and facilities to evaluate the adequacy and effectiveness of the Damage Prevention Program.
AP-11	OPR	6.5(1)(s)	Establish and maintain a data management system for monitoring and analyzing the trends in hazards, incidents and near-misses;	No Issues Identified	The presentations and records provided by Foothills and the results of the interviews serve as evidence that Foothills has established, implemented, and maintains a data management system for monitoring and analyzing the trends in hazards, incidents, and near-misses.

5.0 Discussion

Foothills is owned and operated by TC Energy. TC Energy operations are segregated into four main groups: Energy Solutions, Natural Gas Operations, Oil and Liquids and Power and Storage. The Foothills Pipeline is one of the assets belonging to the Natural Gas Operations group.

The Foothills audit focuses on the company's Damage Prevention program, for several reasons:

- damage Prevention regulations came into force in 2016, as a tool to support the safe execution of activities occurring near a pipeline;
- damaged pipelines pose a significant hazard to the safety of people, property, and the environment; and

- several incidents of third-party damage to pipelines have occurred over the last few years which has resulted in situations of high potential severity.

Specifically, this audit focused on the implementation of the company's Damage Prevention program. The auditors were provided with records or activities related to the Damage Prevention program, presentations on the programs and they conducted interviews to determine the level of implementation of the Damage Prevention Program.

6.0 Conclusion

In summary, the CER conducted an operational audit of Foothills Pipe Lines Ltd. related to Damage Prevention. Out of a total of 11 audit protocols, 11 were classified as no issues identified, resulting in an audit score of 100 percent. As there were no issues identified during this audit, there will be no additional follow-up required by the auditee. The CER will issue an audit close-out letter following release of the final audit report.

Appendix 1: Audit Assessment

AP-01 Damage Prevention Program

Finding status	No issues identified
Regulation	OPR
Regulatory reference	47.2
Regulatory requirement	A company shall develop, implement and maintain a Damage Prevention program that anticipates, prevents, manages and mitigates damage to its pipeline and meets the requirements set out in section 16 of the <i>Canadian Energy Regulator Pipeline Damage Prevention Regulations — Obligations of Pipeline Companies</i> .
Expected outcome	<ul style="list-style-type: none"> • A compliant Damage Prevention program exists; • Content in the Damage Prevention program anticipates, prevents, manages, and mitigates potential damage to the company's pipelines; • The Damage Prevention program has been implemented; and • The Damage Prevention program is maintained.
Relevant information provided by the company	<p>The following key documents and records are related to this finding:</p> <ul style="list-style-type: none"> • TC Energy Damage Prevention Program (CAN-US-MEX); • CDN-GAS-IMP Canadian Onshore Gas Pipeline Integrity Management Program; • TC Energy's Operational Management System (TOMS) Manual (CDN-US-MEX). <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • Company employees from the Damage Prevention team presented the company's evidence related to the Damage Prevention Program. The employees also answered questions posed by the audit team.
Finding summary	The records provided by Foothills and the results of the interviews serve as evidence that Foothills has implemented and maintained a Damage Prevention Program that anticipates, prevents, manages, and mitigates damage to its pipeline and meets the requirements set out in section 16 of the <i>Canadian Energy Regulator Pipeline Damage Prevention Regulations</i> .

Detailed Assessment

The CER notes that the Foothills Damage Prevention Program was the same Damage Prevention Program that was audited by the CER in 2022-23. The associated corrective action associated with this AP is in progress with an end date of January 2024 and therefore no new findings are assessed by this audit team for Foothills. The Corrective and Preventive Action Plan (**CAPA**) for the 2022-23 audit is currently being managed and the corrective action is on track.

The Foothills Damage Prevention Program consists of two main components: preventative measures and monitoring measures. Public Awareness, Hazard Management and Crossings and Encroachment Management comprise the preventive measures component and “Surveillance and Monitoring” makes up the monitoring measures component.

Foothills provided records from these four elements that demonstrated the Damage Prevention Program is being implemented. Records were provided from the following areas:

- Public Awareness
 - Raise Awareness, Hazard Management:
- Hazard Management
 - Excavation Practices
 - One Call Locating and Marking
 - Unauthorized Activity Tracking
 - ROW Maintenance
- Crossing Management
 - Crossing and Encroachment
 - Urban Development Engagement
- Surveillance and Monitoring
 - Aerial Patrol

Summary: The presentation of the activities and records serve as evidence that Foothills' Damage Prevention Program is being implemented as required by this audit protocol. Further assessment and verification of the Damage Prevention Program may be required once the corrective action for this AP related to the 2022-23 audit has been completed.

AP-02 Establish and implement a process for identifying and analyzing hazards

Finding status	No issues identified
Regulation	OPR
Regulatory reference	6.5(1)(c)
Regulatory requirement	A company shall, as part of its management system and the programs referred to in section 55 establish and implement a process for identifying and analyzing all hazards and potential hazards.
Expected outcome	<ul style="list-style-type: none">• The company has a compliant process that is established and implemented;• The methods for identification of hazards and potential hazards are appropriate for the nature, scope, scale, and complexity of the company's operations, activities and the Damage Prevention program;• The identification of hazards and potential hazards must include the full life cycle of the pipeline;• The company has comprehensively identified and analysed all relevant hazards and potential hazards;• The hazards and potential hazards have been identified for the company's scope of operations through the lifecycle of the pipelines; and• The identified hazards and potential hazards have been analysed for the type and severity of their consequences.

Relevant information provided by the company	<p>The following key documents and records are related to this finding:</p> <ul style="list-style-type: none"> • Foothills Frenchman River JSA • General work Permit • Foothills DP SWRA • Unauthorized Activities – 04-24-2020.pdf • Asset Integrity Management Review Q1 2023 • Land Monitoring Program Monthly Meeting Minutes – March, April, and May 2023 • Aerial Pipeline Patrol Procedure • CND-GAS-IMP Canadian Onshore Gas Pipeline Integrity Management Program • Landowner Permanent Road Crossing agreement • Foothills Depth of Cover Extract • Foothills Excavation Checklist • Foothills Excavation Inspection form • Hazard identification via Aerial Patrol • ILM Consult SOW 2022 • Incident Management Process • Management of Change Element Standard • One Call Locating and Marking Procedure • Pipeline Integrity – Training Identification and Resources Procedure • Risk Management (RM) Procedure • SWRA Reviews • System Wide Risk Assessment • Training records <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • Company employees from the Damage Prevention team presented the company’s evidence related to identifying and analysing hazards. The employees also answered questions posed by the audit team.
Finding summary	<p>The records provided by Foothills and the results of the interviews serve as evidence that Foothills has identified and analyzed all hazards and potential hazards.</p>

Detailed Assessment

Foothills has demonstrated that its Risk Management Standard, Element 2 of TC Energy’s Operational Management System (**TOMS**), is implemented. Hazard identification of the Foothills Damage Prevention Program is addressed through the Risk Management (**RM**) Procedure (CAN-US-MEX).pdf (008717335). The Risk Management Procedure outlines the “7-step Risk Management Process” and contains the corporate-level hazard inventory in Appendix E. This appendix provides evidence that Foothills is implementing its process for identifying and analyzing hazards as it highlights all company hazards, including “Human-Induced Hazards” which is the focus of the Damage Prevention Program.

Foothills’ Canadian Onshore Gas Pipe Integrity Management Program (**IMP**) also provides governance to the Damage Prevention Program and addresses threat identification and is aligned to the Risk Management hazard inventory. Section 3 of the Integrity Management Program outlines the “System Wide Risk Assessment (**SWRA**)” process, which is utilized to assess all integrity related risks, including Damage Prevention Program related risk. IMP Table 4.1: Threat Management, constitutes the hazard barrier inventory (**HBI**) for the Integrity Management Program, inclusive of the hazard (threat) “Mechanical Damage” which is the specific focus for Damage Prevention Program.

The Foothills Damage Prevention Program identifies potential mechanical damage hazards through multiple activities including aerial patrols, ground verifications of observations, leak monitoring, crossing management, one call locate and monitoring activities, depth of cover monitoring, land use monitoring and input from public or industry sources. Foothills provided records as evidence that these activities are being conducted.

Foothills analyses hazards through company-wide programs as well as the Damage Prevention Program including: the annual System Wide Risk Assessment (**SWRA**), the System Wide Risk Assessment Procedure, the System Wide Risk Assessment, and the Incident Management Process. The SWRA assesses all company hazards inclusive of External Interference such as “Mechanical Damage”, which is specifically focused on the Damage Prevention Program.

Foothills provided evidence it communicates and trains all staff in the company that use the process by providing records of training of the following: Canadian Onshore Gas Pipeline Integrity Management Program, Pipeline Integrity Training Identification and Resources Procedure, TOMS Risk Management Element, Mechanical Damage Prevention Techniques, Mechanical Damage Threat Management, and the System Wide Risk Assessment.

Summary: The presentation of the activities and records serve as evidence of Foothills process for identifying and analyzing hazards is being implemented as required by this audit protocol.

AP-03 Establish and implement a process for developing and implementing controls

Finding status	No issues identified
Regulation	OPR
Regulatory reference	6.5(1)(f)
Regulatory requirement	A company shall, as part of its management system and the programs referred to in section 55 establish and implement a process for developing and implementing controls to prevent, manage and mitigate the identified hazards, potential hazards and risks and for communicating those controls to anyone who is exposed to the risks.
Expected outcome	<ul style="list-style-type: none"> • The company has a compliant process for developing and implementing controls; • The method(s) for developing controls are appropriate for the nature, scope, scale, and complexity of the company’s operations and activities and the Damage Prevention program; • Controls are developed and implemented; • Controls are adequate to prevent, manage and mitigate the identified hazards and risks; • Controls are monitored on a periodic basis and as needed and re-evaluated for changing circumstances; and • Controls are communicated to those exposed to the risks.

Relevant information provided by the company	<p>The following key documents and records are related to this finding:</p> <ul style="list-style-type: none"> • 2021 CA Public Awareness Annual Assessment • 2022 CA Public Awareness Annual Assessment • 2023 Q1 AI Management Review Meeting Minutes and RAIL • Land monitoring Program monthly meeting minutes March, April and May 2023 • 22CAAPGAS Final • 22CAEOPOGAS Final • 22CAEXFRMGAS Final • Aerial Patrol Audit Foothills 2022 • Landowner Permanent Road Crossing executed • DMOC – Pipeline DOC – 1016500217 • DPP Audit UA 2022 CER Pipeline Performance Measures CA Gas • EJ-210933 – Pipeline Integrity Engineering Justification • Excavation Process (CAN-US-MEX) • Excerpt – Q1-Q2 2022 DP Steering Committee Slide Deck • Foothills depth of cover extract • Foothills Excavation Inspection • Hazard Identification via Aerial Patrol 04-12-2022 • Legal Requirements Monitoring Process • LRMP-DPP-DOC (Legal requirement registry record) • Training records • Management of Change Element Standard CDN • DP Steering Committee Minutes • TC Energy Affected Public Survey – Final • TC Energy Damage Prevention Program • TC Public Officials 2020-21 • Unauthorized Activity Response and Investigation • Year-end 2021 DP Steering Committee Minutes • Excavation Specifications <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • Company employees from the Damage Prevention team presented the company’s evidence related to developing and implementing controls. The employees also answered questions posed by the audit team.
Finding summary	<p>The records provided by Foothills and the results of the interviews serve as evidence that Foothills has developed and implemented controls to prevent, manage and mitigate the identified hazards, potential hazards and risks and for communicating those controls to anyone who is exposed to the risks.</p>

Detailed Assessment

Foothills has demonstrated that its process for developing and implementing controls occurs at both the company level and within the Damage Prevention Program.

When assessing controls for a Damage Prevention Program, it is important to consider that the primary hazard of concern for this program is damage to the pipeline. Therefore, many of the process, standards and supporting systems within the Damage Prevention Program function as overall controls to help eliminate or minimize pipeline damage. Foothills provided multiple examples of its various support systems, along with records of implementation where applicable, including the following: the Legal Requirements Monitoring

Process, Management of Change process, the Learning Management System, the Public Awareness Program, patrols, unauthorized activity investigation and reporting, crossings and encroachment agreements, One-Call locating and marking, depth of cover surveys, land use monitoring, excavation assessments and signage.

Damage Prevention risk management is achieved in accordance with the System Wide Risk Assessment (**SWRA**). During the annual SWRA there is an evaluation of the results of the effectiveness of the various programs in minimizing threats to the pipeline to ensure risk is at an acceptable level. For Damage Prevention, the specific threat that is reviewed is Mechanical Damage / External Interference. The response to a SWRA result is based on risk acceptance criteria developed with industry standards and best practices. Additional preventative or mitigative activities are planned as necessary. The annual review monitors the effectiveness of Damage Prevention controls and confirms that all routes with a risk exceedance have a mitigation plan developed by the Damage Prevention Program. Foothills provided evidence of these reviews to demonstrate these activities are occurring.

Foothills completes an annual management review on the Damage Prevention Program to ensure the management system, programs and business unit activities are adequate, effective, and meet business needs. Management review identifies opportunities for continual improvement and/or proposed actions based on reviews of the following areas: incidents, changes to legal requirements, notices of non-compliance, risk register and hazard inventory, assurance activities such as audits and inspections and corrective action plans. Foothills provide a copy of its Q1 AI management Review Meeting Minutes and RAIL document as evidence that these reviews are taking place.

Additionally, Foothills also completes an annual public awareness program assessments and periodic public awareness effectiveness surveys as a method to monitor Damage Prevention/Public Awareness effectiveness. The annual assessment reviews of any changes to applicable regulations, feedback from effectiveness surveys, continuous improvement opportunities and annual program strategy. As evidence that these activities are taking place, Foothills provided copies of its 2021 and 2022 CA Public Awareness Annual Assessments, the TC Public Officials 2020-21 document, and the TC Energy Affected Public Survey – Final.

Another annual review completed by Foothills is of the Pipeline Aerial Patrols. Foothills conducts an audit of the aerial patrol program to verify that the minimum flight frequencies for the Foothills lines are completed. Foothills provided an extract from the 2022 audit for a portion of the Foothills system – 2022 Aerial Patrol Audit Foothills as evidence this audit is taking place.

The Damage Prevention Program monitors the total number of unauthorized activities (a) and the total number of permissions granted (b) and calculate a ration of (b)/(a) and this ration is a way to measure the effectiveness of its controls. Foothills provided a copy of the CER Performance Measures: Damage Prevention document as evidence this activity is taking place.

Summary: The presentation of the activities and records serve as evidence of Foothills is developing and implementing controls as required by the criteria outlined in the audit protocol.

AP-04 Establish and implement a process for identifying and managing change

Finding status	No issues identified
Regulation	OPR
Regulatory reference	6.5(1)(i)
Regulatory requirement	A company shall, as part of its management system and the programs referred to in section 55 establish and implement a process for identifying and managing any change that could affect safety, security or the protection of the environment, including any new hazard or risk, any change in a design, specification, standard or procedure and any change in the company's organizational structure or the legal requirements applicable to the company.
Expected outcome	<ul style="list-style-type: none"> • The company has a compliant process for identifying and managing change; • Methods are defined to identify and manage change; and • Impacts to the company management system the Damage Prevention program are identified and assessed.
Relevant information provided by the company	<p>The following key documents and records are related to this finding:</p> <ul style="list-style-type: none"> • DMOC – Pipeline DOC – 1016500217 • Management of Change Element Standard CDN-US-MEX • Learning transcripts <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • Company employees from the Damage Prevention team presented its evidence related to identifying and managing change. The employees also answered questions posed by the audit team
Finding summary	The records provided by Foothills and the results of the interviews serve as evidence that Foothills has identified and managed any change that could affect safety, security, or the protection of the environment, including any new hazard or risk, any change in a design, specification, standard or procedure and any change in the company's organizational structure or the legal requirements applicable to the company.

Detailed Assessment

Foothills has demonstrated that its Management of Change (**MOC**) Standard, Element 5 of TC Energy's TOMS is being implemented at Foothills. There are three types of changes including document change, technical & physical change and people change.

The various applications of the MOC includes new controlled documents, revisions to existing control documents, deviations to controlled documents, changes to assets, facilities and equipment, changes that arise across the project lifecycle, changes to engineering work, organizational changes at VP level and above and other MOC procedures that impact people.

Foothills provided a record of document management of change, TEP-IN-DOCA-GL Pipeline Operation Depth of Cover Assessment Procedure (**CAN**), as evidence that the process for identifying and managing change is being implemented.

Foothills has an internal Learning Management System for personnel, some of the training is mandatory for certain roles and voluntary for others. Foothills has specific training related to the MOC element and provide records of training that included: Introduction to management of change, Document Contact and Owner Manger, Controlled Document Library, Introduction to Controlled Document Library, SAP: MOC – Management of Technical and Physical Changes and Pipeline Integrity Communication Procedure training.

Summary: The presentation of the activities and records serve as evidence of Foothills identifies and managing change fulfilling the requirements outlined in the audit protocol.

AP-05 Damage Prevention Program – Minimum Content – Monitoring – Change in Land Use

Finding status	No issues identified
Regulation	DPR-O
Regulatory reference	16(b)
Regulatory requirement	The Damage Prevention program that a pipeline company is required to develop, implement and maintain under section 47.2 of the <i>Canadian Energy Regulator Onshore Pipeline Regulations</i> must include ongoing monitoring of any changes in the use of the land on which a pipeline is located and the land that is adjacent to that land.
Expected outcome	<ul style="list-style-type: none"> • The Damage Prevention Program is developed, implemented, and maintained; • The Damage Prevention Program references ongoing monitoring of changes to land use, both adjacent and on land within which the pipeline is located; and • The company can provide evidence to demonstrate ongoing monitoring of land use is occurring.
Relevant information provided by the company	<p>The following key documents and records are related to this finding:</p> <ul style="list-style-type: none"> • 2022 TC energy technical data report • 20230302 land monitoring program monthly meeting minutes • 20230406 land monitoring program meeting minutes • 20230504 land monitoring program monthly meeting minutes • ILM consultant SOW 2022 • solar farm one call PDF • solar farm aerial patrol observation • sunder mountain springs • Travers solar <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • Company employees including Right of Way management presented its evidence related to the program for monitoring changes to land use. The employees also answered questions posed by the audit team.
Finding summary	The presentation of the activities and records serve as evidence of Foothills' comprehensive monitoring of land use changes, fulfilling the requirements outlined in the audit protocol.

Detailed Assessment

Foothills has demonstrated its program for monitoring changes in land use, both in adjacent areas and within the right-of-way (**ROW**), is aligned with the requirements of paragraph 16(b) of the DPR-O. Foothills has provided the auditors with a range of documentation and samples highlighting land usage changes. The findings of the audit affirm that Foothills has successfully implemented a process for monitoring these changes.

Monitoring Activities: To effectively monitor land use changes, Foothills has employed various activities, which serve as examples of their monitoring efforts. These activities include:

- Local Land-use Planning Consultants
- Subject Matter Expert (**SME**) input for Designated Project (**DP**) and Construction, Safety, and Environmental Protection (**CSA**) conformance
- Watchlist implementation
- Compliance with Directive 56 Industry Notifications
- Aerial and Ground Patrols
- Regular Landowner Visits
- Population Structure Changes analysis

Personnel Responsible for Monitoring: Foothills has designated specific positions within the company to oversee the monitoring of land use changes. These positions include:

- ILM File Manager
- Planning Consultant
- DP Analyst
- Class Analyst
- Regional Operations Personnel
- Regional Land Representative

Records of Monitoring Activities: The company has maintained detailed records of the activities related to monitoring land use changes. These records include:

- Planning Consultant Scope of Work
- Monthly Meeting Minutes for the year 2023
- Referral documentation
- Watchlist updates
- 2022 Population Density Report
- Sundre Mountain Springs - a proposed subdivision
- Travers Solar Project

Summary: The presentation of the activities and records serve as evidence of Foothills' comprehensive monitoring of land use changes, fulfilling the requirements outlined in the audit protocol.

AP-06 Damage Prevention Program – Minimum Content – Monitoring – Change in Land Owner

Finding status	No issues identified
Regulation	DPR-O
Regulatory reference	16(c)
Regulatory requirement	The Damage Prevention program that a pipeline company is required to develop, implement and maintain under section 47.2 of the <i>Canadian Energy Regulator Onshore Pipeline Regulations</i> must include ongoing monitoring of any change in the landowner of the land on which a pipeline is located.
Expected outcome	<ul style="list-style-type: none"> • The Damage Prevention program is developed, implemented, and maintained; • The Damage Prevention program references ongoing monitoring of changes of landowners, for both adjacent land and on land within which the pipeline is located; and • The company can provide evidence to demonstrate ongoing monitoring of landowners is occurring.
Relevant information provided by the company	<p>The following key documents and records are related to this finding:</p> <ul style="list-style-type: none"> • 2022 Calendar mailing list • FPL sample landowner changes • Landworks Land System- Landownership changes • TC Energy Damage prevention program. <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • Company employees including Right of Way management presented its evidence related to the program for monitoring changes to land ownership. The employees also answered questions posed by the audit team.
Finding summary	The presentation of the activities and records serve as evidence of Foothills' comprehensive monitoring of land ownership changes, fulfilling the requirements outlined in the audit protocol.

Detailed Assessment

In compliance with paragraph 16(c) of the DPR-O, Foothills has provided the auditors with a range of documentation and samples highlighting changes in landownership. The findings of the audit affirm that Foothills has successfully implemented a process for monitoring these changes.

The Foothills' Public Awareness team works with the Land Operations team each year to compile the most up-to-date Foothills landowner list, which is used in the annual distribution of the calendar. The calendar, developed as a means of enhanced outreach for Public Awareness and Damage Prevention messaging, is sent each year to landowners across the pipeline system.

The Public Awareness team also updates the baseline brochures each year and uploads these to the TC Energy external website and internal online order desk to ensure that Foothills field technicians and land agents have the most recent materials to distribute.

Foothills is informed of changes by:

- Regular Landowner / Regional Land Rep communications
- Landowner directly
- Landowner Lawyer or Power of Attorney
- Mortgage Lender / Bank
- Third Party Compilation of Land Titles

Personnel Responsible for Monitoring: Foothills has designated specific positions within the company to oversee the monitoring of landowner changes. These positions include:

- Land Analysts
- Land Broker Consultants
- Regional Land Representatives

Records of Monitoring Activities: The company has maintained detailed records of the activities related to monitoring landowner changes. These records include:

- Foothills' Public Awareness Annual Calendar
- Foothills Regional Land Rep providing new landowners with "Living and Working Near Pipelines" booklet

Summary: The presentation of the activities and records serve as evidence of Foothills' comprehensive monitoring of land ownership changes, fulfilling the requirements outlined in the audit protocol.

AP-07 Damage Prevention Program – Minimum Content – Managing Requests for Consent

Finding status	No issues identified
Regulation	DPR-O
Regulatory reference	16(f)
Regulatory requirement	The Damage Prevention program that a pipeline company is required to develop, implement and maintain under section 47.2 of the <i>Canadian Energy Regulator Onshore Pipeline Regulations</i> must include a process for managing requests for the consent to construct a facility across, on, along or under a pipeline, to engage in an activity that causes a ground disturbance within the prescribed area or to operate a vehicle or mobile equipment across the pipeline.
Expected outcome	<ul style="list-style-type: none"> • The company has a compliant process; • The process addresses requests for consent to: <ul style="list-style-type: none"> • construct a facility across, on, along, or under a pipeline; • engage in an activity that causes ground disturbance within the prescribed area; and • operate a vehicle or mobile equipment across the pipeline. • The process describes how consent is determined. • The process describes how the issuance or denial of consent is communicated to the requestor; • The company can demonstrate the process has been used.

Relevant information provided by the company	<p>The following key documents and records are related to this finding:</p> <ul style="list-style-type: none"> • FPL Facility Crossing_Pipeline.pdf • FPL Ground Disturbance Consent.pdf • FPL Permanent Road Crossing.pdf • 202301090024_05-16-2023-10-43-36.pdf • Facility Consent: D-34734-1 North 40 Pipeline Crossing • Agreement_executed.pdf • Ground Disturbance Consent: D-31718-1 Ground • Distrubance_executed.pdf • Vehicle Crossing: D-32855-1 Landowner Permanent Road • Crossing_executed.pdf • D-28135 - Mountain View County Denied Application.pdf <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • Company employees including Right of Way management presented its evidence related to the process for managing requests for the consent to construct a facility across, on, along or under a pipeline, to engage in an activity that causes a ground disturbance within the prescribed area or to operate a vehicle or mobile equipment across the pipeline.
Finding summary	<p>The presentation of the activities and records serve as evidence of Foothills has implemented a process for managing requests for the consent to construct a facility across, on, along or under a pipeline, to engage in an activity that causes a ground disturbance within the prescribed area or to operate a vehicle or mobile equipment across the pipeline fulfilling the requirements outlined in the audit protocol.</p>

Detailed Assessment

Foothills has implemented and maintained a process for managing requests for consent to construct a facility across, on, along, or under a pipeline, to engage in activities causing ground disturbance, or to operate a vehicle or mobile equipment across the pipeline, as required by the OPR.

Foothills manages its crossing permits through various methods. They promote their permit process through public awareness initiatives and One-Call programs to ensure that stakeholders are informed about the procedures.

Foothills utilizes the “TC Third Party Crossings Tool” on its website, as a platform for permit submissions. Once a permit is submitted, it goes through an evaluation process to assess its feasibility and compliance with regulations. Foothills responds to permit requests, and in some cases, field representatives may receive these requests directly. By following these steps, Foothills pipeline handles and addresses crossing permit requests to ensure compliant operations.

Foothills provided documentation demonstrating the use of an electronic request tool to facilitate requests for written consents for crossing and encroachment requests. They have also provided samples of records, such as the:

- FPL Facility Crossing Pipeline.pdf;
- FPL Ground Disturbance Consent.pdf; and
- FPL Permanent Road Crossing.pdf

which illustrate the process for tracking consent to construct a facility. These records indicate that Foothills has mechanisms in place to manage and track consent requests.

Foothills provided samples of records demonstrating communication to the requestors when consent has been granted. These samples show that Foothills communicates the granted consent to the requestors. Examples include:

- D-34734-1 North 40 Pipeline Crossing Agreement_executed.pdf;
- D-31718-1 Ground Disturbance_executed.pdf; and,
- D-32855-1 Landowner Permanent Road Crossing_executed.pdf.

Foothills does not have a specific example of a record where consent was denied. They provided a sample record from TC Energy's NGTL system, which demonstrates a denied application, D-28135 - Mountain View County Denied Application.pdf). Although it is not an example from Foothills, it does show that the company follows a process for notifying requestors of denied consent and working with them to find alternative solutions.

Summary: The presentation of the activities and records serve as evidence of Foothills has implemented a process for managing requests for the consent to construct a facility across, on, along or under a pipeline, to engage in an activity that causes a ground disturbance within the prescribed area or to operate a vehicle or mobile equipment across the pipeline fulfilling the requirements outlined in the audit protocol

AP-08 Establish and implement a process for internal and external communication of information

Finding status	No issues identified
Regulation	OPR
Regulatory reference	6.5(1)(m)
Regulatory requirement	A company shall, as part of its management system and the programs referred to in section 55 establish and implement a process for the internal and external communication of information relating to safety, security and protection of the environment.
Expected outcome	<ul style="list-style-type: none"> • The company has a compliant process that is established and implemented; • The methods for both internal communication and external communication are defined; • The company is communicating internally and externally related to safety, security and protection of the environment; and • Internal and external communication is occurring, and it is adequate for the management system and the Damage Prevention program implementation.
Relevant information provided by the company	<p>The following key documents and records are related to this finding:</p> <ul style="list-style-type: none"> • TOMS Communication Standard (CAN-US-MEX).pdf, (1017932461) • supports TC Energy's Operational Management System (TOMS) Manual (CDN-US-MEX).pdf, (009964063) and: • The company provided over 20 examples of internal and external communications including brochures, calendars, EM information and general pipeline safety information. • Steering committee meeting minutes. • Damage prevention scorecard. • Various website addresses. <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • Company employees including Right of Way management presented evidence related to the process for managing the internal and external communication of information relating to safety, security and protection of the environment.
Finding summary	Foothills has demonstrated communication processes, both internally and externally, in compliance with regulatory requirements and the dissemination of information related to safety, security, and environmental protection. The integration of the communication process within the Damage Prevention Program, along with the utilization of tools, platforms, and outreach methods.

Detailed Assessment

Foothills' communication processes and efforts pertaining to safety, security, and environmental protection. Foothills, a subsidiary of TC Energy, has established and implemented a communication process in alignment with regulatory requirements.

Communication Process:

Foothills adheres to the communication requirements outlined in Section 6 of the corporate management system. This section references the Communications Standard, which mandates all section 55 program areas to follow the Corporate Communication Policy and Communication Strategy. The responsibility of determining the necessity of a communication strategy for specific areas of responsibility lies with the program owners.

Internal Communication

Damage Prevention Program (DPP):

The DPP, as a sub-program of the IMP, effectively employs the Pipeline Integrity Communication Procedure for internal communication. Various methods are utilized within the DPP, including management review meetings, quarterly performance reviews, technical communication presentations, lunch and learn events, annual likelihood of failure reports, consequence and risk values from the SWRA process, baseline assessment plans for high consequence areas, and master plans.

Monthly Meetings and Reports:

Regular monthly meetings take place between the Damage Prevention and Public Awareness teams within the DPP to review Unauthorized Activity Reports, validate threat classifications, and assess mitigation efforts. The Damage Prevention team conducts an analysis of unauthorized activities and prepares reports that identify locations with increased frequency or severity.

External Communication

Public Awareness Program:

Foothills implements a Public Awareness Program to facilitate external communication. This program identifies external stakeholder audiences, such as the public, emergency and public officials, and excavators/contractors. It provides information on potential hazards, measures for self-protection, and instructions on how to notify Foothills and emergency officials. Contact information for emergencies, one-call centers, general inquiries, consent applications, and crossing inquiries is readily available.

Outreach Methods:

Foothills utilizes various outreach methods for both internal and external communication purposes. Internal communications are conducted through the company website (**1TC**), incident notification emails, and incident logging via the Enterprise Incident Management Software (**EISM**). External communication occurs through web-based platforms such as the Safe Digging and Youth Energy Safe websites, as well as social media channels like Facebook, LinkedIn, and Instagram. Additionally, targeted public awareness campaigns, advertisements, and active participation in industry groups such as BCCGA and BC One Call are employed to promote best practices and facilitate collaboration on ground disturbance messaging.

Specific Communication Requirements:

Foothills effectively integrates process-specific communication requirements into related process documents. Examples include Incident Management Communications, communications related to changes in legal requirements, management of change communications, and communications associated with nonconformances or opportunities for improvement. Project-related communications are governed by documents such as the Communication Plan, Community Relations Plan, Interface Management Plan, Management System Requirements for Prime Contractors Standard, Project Staffing and Organization Plan, and Stakeholder Plan.

Summary: Foothills has demonstrated communication processes, both internally and externally, in compliance with regulatory requirements and the dissemination of information related to safety, security, and environmental protection. The integration of the communication process within the DPP, along with the utilization of tools, platforms, and outreach methods.

AP-09 Establish and implement a process for internal reporting of hazards and for taking corrective actions

Finding status	No issues identified
Regulation	OPR
Regulatory reference	6.5(1)(r)
Regulatory requirement	A company shall, as part of its management system and the programs referred to in section 55 establish and implement a process for the internal reporting of hazards, potential hazards, incidents and near-misses and for taking corrective and preventive actions, including the steps to manage imminent hazards.
Expected outcome	<ul style="list-style-type: none"> • The company has a compliant process that is established and implemented; • The company has defined its methods for internal reporting of hazards, potential hazards, incidents and near-misses; • Hazards and potential hazards are being reported as required by the company's process; • Incidents and near-misses are being reported as required by the company's process; • The company has defined how it will manage imminent hazards; • The company is performing incident and near-miss investigations; • The company's investigation methodologies are consistent and appropriate for the scope and scale of the actual and potential consequences of the incidents or near misses to be investigated; • The company has defined the methods for taking corrective and preventive actions; and • The company can demonstrate through records that all corrective and preventative actions can be tracked to closure.

Relevant information provided by the company	<p>The following key guidance documents are related to this finding:</p> <ul style="list-style-type: none"> • Incident Management Standard • Incident Management Process • Incident Recording Procedure • Incident Quality Management Classification Guide • Contingency Planning Process • Aerial Pipeline Patrol Procedure • Unauthorized Activity Response and Investigation Procedure • Risk Management Procedure • Communication Strategy PI Program • Pipeline Inspection Report Form <p>The following records are related to this finding:</p> <ul style="list-style-type: none"> • Damage Prevention NCR/OFI FPL • Summary Report Foothills - 1st and 2nd Incident 05-28-2019 • Unauthorized Activity 04-24-2020 & 06-25-2020 • DP Steering Committee Agendas: Q1-Q2 2021, Q1-Q2 2022, Year-End 2021 • Stakeout Report and Ground Disturbance Approval • DPP_PowerBU_Scorecards 2021 2022 2023 • EHSM_Foothills_July_2022 • Foothills_DP_SWRA • Foothills_028256_Excavation Inspection Form • Hazard Identified via Aerial Patrol 04-12-2022 • Land Monitoring Program Monthly Meeting Minutes (3 examples) <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • Company employees presented the company’s evidence related to the internal reporting of hazards and for taking corrective actions. The employees also answered questions posed by the audit team.
Finding summary	<p>The records provided by Foothills and the results of the interviews serve as evidence that Foothills has reported hazards, potential hazards, incidents and near-misses and has conducted investigations leading to corrective and preventive actions in accordance with the requirements set out in their guidance documents.</p>

Detailed Assessment

Foothills demonstrated that it conducts activities for the internal reporting of hazards, potential hazards, incidents, and near-misses and for taking corrective and preventive actions and provided evidence that this process has been implemented.

Foothills provided a PowerPoint presentation which demonstrated the following:

- Hazards are identified through observations made through various Damage Prevention monitoring and inspection activities, including but not limited to aerial patrols, ground patrols, and depth of cover surveys. Each such activity is guided by its own procedure which sets out what information is to be recorded and how to record it. Examples of such records were provided to the auditors for review.
- These potential hazards are then screened and classified by level of risk and entered into Foothill's incident management database (**EHSM**).
- Foothills' Incident Management Process then guides the completion of investigations, the level of which depends on the scale and complexity of each issue. Most hazards are related to Unauthorized Activity. Foothills has an Unauthorized Activity Response and Investigation Procedure to provide additional guidance for these issues.
- Once the causes of the hazard/incident have been determined, Foothills initiates corrective and preventive action to address them. The EHSM database provides how corrective and preventive actions can be assigned, tracked, and communicated. Examples were provided to the auditors for review.

Additionally, Foothills was able to demonstrate that corrective and preventive actions are tracked to closure. This is facilitated by a monthly review. Unauthorized Activities, both new and closed, are score-carded to help monitor progress.

Summary: The records provided by Foothills and the results of the interviews serve as evidence that Foothills has reported hazards, potential hazards, incidents, and near-misses and has conducted investigations leading to corrective and preventive actions in accordance with the requirements set out in their guidance documents.

AP-10 Establish and implement a process for inspecting and monitoring company activities for effectiveness

Finding status	No issues identified
Regulation	OPR
Regulatory reference	6.5(1)(u)
Regulatory requirement	A company shall, as part of its management system and the programs referred to in section 55 establish and implement a process for inspecting and monitoring the company's activities and facilities to evaluate the adequacy and effectiveness of the programs referred to in section 55 and for taking corrective and preventive actions if deficiencies are identified.
Expected outcome	<ul style="list-style-type: none"> • The company has a compliant process that is established and implemented; • The company has developed methods for inspecting and monitoring their activities and facilities; • The company has developed methods to evaluate the adequacy and effectiveness of the Damage Prevention program; • The company has developed methods for taking corrective and preventive actions when deficiencies are identified; • The company is completing inspections and monitoring activities as per the company's process; and • The company retains records of inspections, monitoring activities, and corrective and preventive actions implemented by the company.

Relevant information provided by the company	<p>The following key documents and records are related to this finding:</p> <ul style="list-style-type: none"> • Incident Management Standard • Incident Management Process • Incident Quality Management Classification Guide • Contingency Planning Process • Aerial Pipeline Patrol Procedure • Unauthorized Activity Response and Investigation Procedure • Management Review of Management Systems and Programs Procedure <p>The following records are related to this finding:</p> <ul style="list-style-type: none"> • Damage Prevention NCR/OFI FPL • Unauthorized Activity 04-24-2020 & 06-25-2020 • DP Steering Committee Agendas: Q1-Q2 2021, Q1-Q2 2022, Year-End 2021 • DP Steering Committee Meeting Minutes - 2021 Mid-year, 2021 & 2022 Year End • AI Management Review Meeting Minutes & RAIL Q1 2023 • 21-T21-PIDP-AO-Damage Prevention Audit CGO • DPP Implementation Audit Report 20-PIDP-AO108 • Damage Prevention Program TOMS Compliance Audit • Foothills_028256_Excavation Inspection Form • Hazard Identified via Aerial Patrol 04-12-2022 • Construction Monitoring & Facility Crossing As Built Information • Land Monitoring Program Monthly Meeting Minutes (3 examples) • CMR 3445 - Example CMR & PIR • Foothills Geotechnical Observations • Foothills Signage Observations <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • Company employees presented the company's evidence related to inspecting and monitoring the company's activities and facilities to evaluate the adequacy and effectiveness of the Damage Prevention Program and for taking corrective actions. The employees also answered questions posed by the audit team.
	Finding summary

Detailed Assessment

Foothills demonstrated that it inspects and monitors the company's activities and facilities to evaluate the adequacy and effectiveness of the Damage Prevention Program and provided evidence that this process has been implemented.

Foothills provided a presentation on how the process is followed to bring relevance to its implementation activities. The presentation highlighted that the Damage Prevention Program has two main types of activities, those which prevent hazards and those which detect and respond to hazards. Those activities which detect hazards serve to identify areas in which the activities to prevent hazards have been ineffective.

Foothills' preventive activities include:

- Public awareness promotion
- Crossings management
- Signage maintenance
- Natural hazard management
- One-Call location services
- Foothills' hazard detection activities include:
 - Aerial and ground patrols
 - Leak detection

Each of the above noted activities has guidance documents associated with them and records of the activities and their results are maintained. Several examples were provided to the auditors for review.

The results of the noted activities are compared against various goals, objectives, and targets related to each activity.

The occurrence of Unauthorized Activities is an area of focus for Foothills. Each occurrence is investigated (as discussed in AP-09) and corrective and preventive actions are implemented. The corrective and preventive actions may result in improvements to Foothills' hazard prevention activities or any other part of the Damage Prevention Program. Examples of how Unauthorized Activities are managed and resulting corrective actions developed and implemented were provided to the auditors for review.

Improvement to the Damage Prevention Program is also sought through the implementation of compliance audits, an example of which was provided for review. As well, audits conducted under Foothills' Quality Assurance Program contribute to the improvement of the program. Examples of two such audits were provided to the auditors for review. The Quality Assurance Program was not within the scope of this audit, but Foothills' provided audit reports that demonstrated their continuous improvement efforts.

Summary: The records provided by Foothills and the results of the interviews serve as evidence that Foothills has implemented a process for inspecting and monitoring the company's activities and facilities to evaluate the adequacy and effectiveness of the Damage Prevention Program.

AP-11 Establish and maintain a data management system for monitoring and analyzing the trends in hazards, incidents, and near-misses

Finding status	No issues identified
Regulation	OPR
Regulatory reference	6.5(1)(s)
Regulatory requirement	A company shall, as part of its management system and the programs referred to in section 55, establish and maintain a data management system for monitoring and analyzing the trends in hazards, incidents and near-misses;.
Expected outcome	<ul style="list-style-type: none"> • The company has established and maintains a data management system. • The company's data management system can demonstrate all information is traceable and trackable to its hazards, incidents and near misses. • The company is analysing and trending data collected from hazards, incidents and near-misses.

Relevant information provided by the company	<p>The following key documents and records are related to this finding:</p> <ul style="list-style-type: none"> • Incident Management Standard • Incident Management Process • Incident Quality Management Classification Guide • Incident Recording Procedure • Unauthorized Activity Response and Investigation Procedure • Management Review of Management Systems and Programs Procedure <p>The following records are related to this finding:</p> <ul style="list-style-type: none"> • Damage Prevention NCR/OFI FPL Summary Report • DPP_PowerBU_Scorecard_2021 2022- 2023 • DP Steering Committee Minutes & Slide Deck - 2021 Mid-year, 2021- 2022-Year End • AI Management Review Meeting Minutes & RAIL Q1 2023 • Foothills - 1st and 2nd Incident 05-28-2019 • Unauthorized Activity 04-24-2020 & 06-25-2020 • Hazard Identified via Aerial Patrol 04-12-2022 CMR 3445 - Example CMR & PIR <p>The following application walk-through presentations are related to this finding:</p> <ul style="list-style-type: none"> • Eagle Eye Aerial Patrol Database • EHSM Enterprise Incident Management System • Third Party Crossing Online Application System • Utilisphere – One Call Ticket Management System <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • Company employees presented the company’s evidence related to their use of a data management system for monitoring and analysing trends. This included walk-through presentations on four (4) of the company’s data management systems. The employees also answered questions posed by the audit team.
Finding summary	<p>The presentations and records provided by Foothills and the results of the interviews serve as evidence that Foothills has established, implemented, and maintains a data management system for monitoring and analyzing the trends in hazards, incidents, and near-misses.</p>

Detailed Assessment

Foothills demonstrated through presentations and interviews that it has several data management systems, each of which contains some information relevant to monitoring the trends in hazards, incidents, and near-misses. These data management systems include, but are not limited to:

- Eagle Eye Aerial Patrol Database – used to record the results of aerial patrols, which are a key component of the Damage Prevention Program.
- Environment, Health and Safety Management (**EHSM**) Enterprise Incident Management System – used to record the details of Damage Prevention related incidents, record the results of investigations, and track corrective and preventive actions to closure.
- Third Party Crossing Online Application System – used to initiate, track and manage crossing agreements, which are an important means of reducing third party hazards.

- Utilisphere – One Call Ticket Management System – used to track and manage One-call activities, which are also an important means of reducing third party hazards.

These data management systems are related to the Damage Prevention Program, there are other data management systems exist that are also used to support Damage Prevention activities, such as the work order management system.

Foothills focusses its trending on its key performance indicators, particularly those concerning Unauthorized Activities (**UA**). UAs are inclusive of third-party hazards, incidents, and near-misses. Two indicators that are measured include new UAs and closed UAs, being those where investigations have been completed and the corrective and preventive actions have been implemented. The trends are analysed using the EHSM data management system.

Trends are score-carded, communicated to others including the Damage Prevention Steering Committee, and assessed for root causes. Copies of scorecards and Damage Prevention Steering Committee meeting minutes were provided to the auditors for review.

Summary: The presentations and records provided by Foothills and the results of the interviews serve as evidence that Foothills has established, implemented, and maintains a data management system for monitoring and analyzing the trends in hazards, incidents, and near-misses.

Appendix 2: Terms and Abbreviations

For a set of general definitions applicable to all operational audits, please see Appendix I of the CER Management System Requirements and CER Management System Audit Guide found on www.cer-rec.gc.ca.

Term or Abbreviation	Definition
CER	Canada Energy Regulator
CER Act	<i>Canadian Energy Regulator Act</i> (S.C. 2019, c.28, s.10)
OPR	<i>Canadian Energy Regulator Onshore Pipeline Regulations</i> (SOR/99-294)
The company	Foothills Pipe Line Ltd.