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Final Audit Report

PKM Cochin ULC

Emergency Management Program

CV2526-021

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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**).

The CER conducted an Emergency Management (**EM**) operational audit of PKM Cochin ULC (**the company**) between 7 April 2025 and 22 July 2025.

The objective of this audit is to verify that the company has developed and implemented specific elements of an EM program in accordance with the requirements of the OPR related to:

- Hazard identification;
- Risk assessment;
- Making employees and others aware of their responsibilities;
- Internal and external communication;
- Contingency planning; and
- Management of documentation.

All seven audit protocols met the expected outcomes and no issues were identified. Overall, the company's management system and the emergency management program are well designed. Processes exist for each of the requirements assessed and are both well written and comprehensive. Interviewed company staff were well informed and knowledgeable about the emergency management program as well as their specific roles. The company was able to produce records for all sampling requests, indicating that the processes were being implemented and in use.

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1.0 Background

1.1 Introduction

The 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 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 OPR.

The CER conducted an **Emergency Management** operational audit of PKM Cochin ULC between 7 April 2025 and 22 July 2025.

1.2 Description of Audit Topic

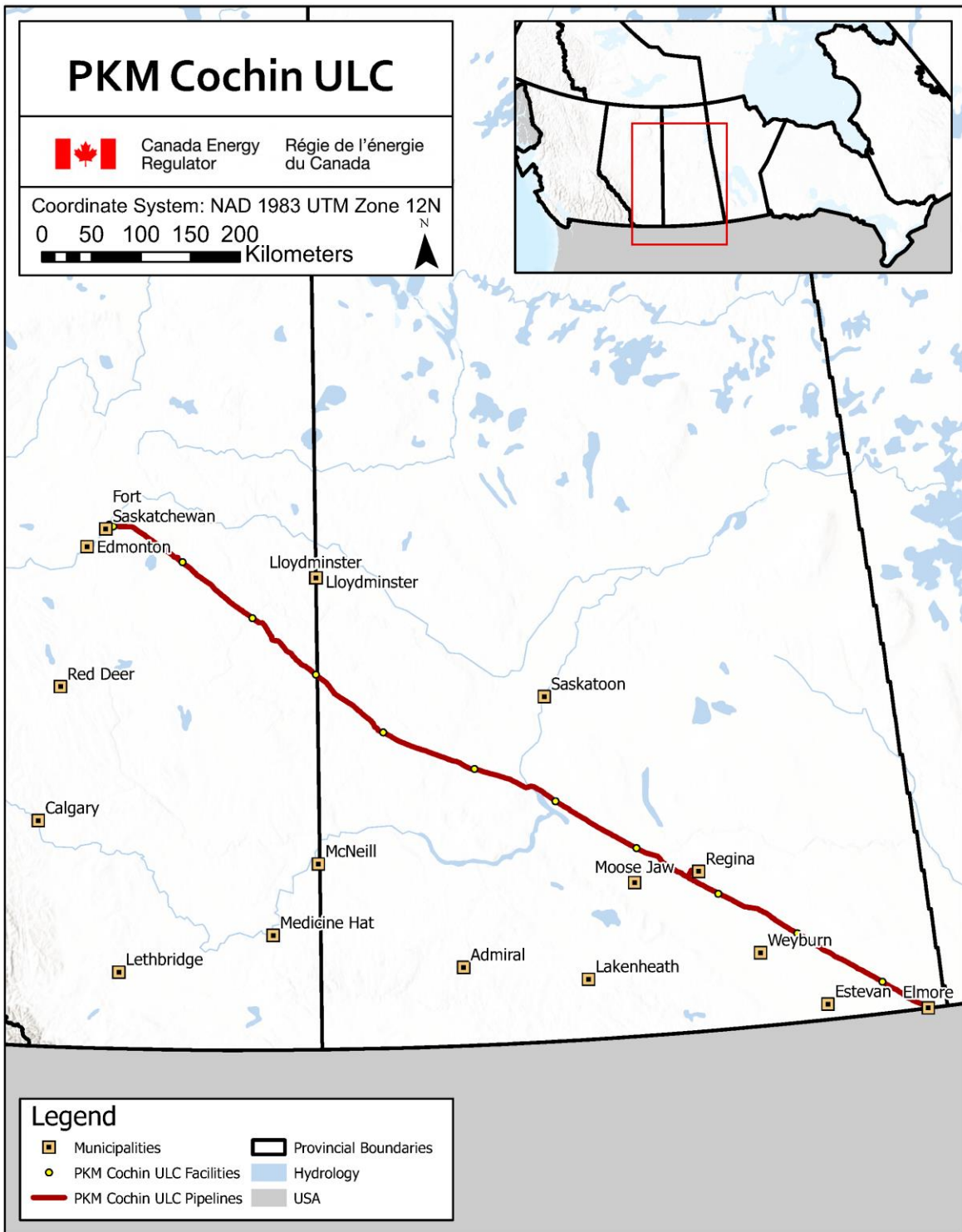
The CER expects companies to have a fully established and implemented emergency management program. This program is expected to proactively address the various scenarios, contingencies, and related actions that are necessary to be taken to protect the public, workers, and the environment during all potential upset or abnormal operating conditions experienced by the company. These upset or abnormal operating conditions can take place at any point during a pipeline or facility's lifecycle and in any season or weather event. As part of the establishment and implementation of the emergency management program, the CER expects the company's management system to be integrated into this program and linked to other section 55 programs under the OPR, as necessary, to have robust controls in place to manage and mitigate any upset or abnormal conditions that may occur.

1.3 Company Overview

PKM Cochin ULC's pipeline system consists of approximately 1,000 kilometres (**km**) of pipeline and 10 pump stations. The Canadian portion of the pipeline currently moves approximately 100,000 barrels per day of condensate from Elmore, Saskatchewan to Fort Saskatchewan, Alberta (Figure 1).

The Cochin pipeline has been operating since 1979 under various owners. Originally, the pipeline moved propane eastward from Fort Saskatchewan to Windsor, Ontario. In July 2014, the direction of flow was reversed to transport condensate westbound. Pembina Pipeline Corporation acquired the Cochin pipeline in December 2019. Pembina Pipeline Corporation now operates the pipeline as a subsidiary named PKM Cochin ULC, under Certificate OC-29.

The figure below depicts the company's CER-regulated assets.



The map is a graphical representation intended for general informational purposes only. Map produced by the CER, July 2025, Last updated on Jul 17

Figure 1. Map of Company's Regulated Assets

2.0 Objective and Scope

The objective of this audit is to verify that the company has developed and implemented specific management system elements of an emergency management program in accordance with the requirements of the OPR related to:

- hazard identification;
- risk assessment;
- making employees and others aware of their responsibilities;
- internal and external communication;
- contingency planning; and
- the management of documentation.

The table below outlines the scope selected for this audit.

Table 1. Audit Scope

Audit Scope	Details
Audit Topic	Emergency Management
Lifecycle Phases	<input type="checkbox"/> Construction <input checked="" type="checkbox"/> Operations <input type="checkbox"/> Abandonment
Section 55 Programs	<input checked="" 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 type="checkbox"/> Damage Prevention
Time Frame	Open

3.0 Methodology

An audit notification letter was sent to the company on 7 April 2025 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 8 April 2025 and followed up on 14 April 2025 with a meeting with the company staff to discuss the plans and schedule for the audit. Document review began on 14 May 2025 and interviews were conducted from 9 June 2025 to 18 June 2025.

The auditors assessed compliance through:

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

The purpose of the document review is to identify the suite of documents that are intended to meet the requirements related to the audit protocols. This review assesses whether the process is established. The auditors reviewed approximately 65 documents.

The interviews are conducted to determine the extent to which the processes have been implemented. If the responses are consistent with what is written, the auditors assume that the staff are aware of the process, and that it is being followed. The first set of interviews was conducted primarily with management and senior staff to discuss each of the audit protocols. The second set of interviews was organized based on positions, which ranged from office staff to field staff, where the auditors asked questions relating to all the audit protocols at each interview. The auditors conducted 11 interviews.

Records are also sampled to assess whether the process is implemented. Records are outputs, or products of a process. The presence of properly completed records suggests that the process is being used. The auditors sampled approximately 25 records.

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

In accordance with the established CER audit process, the lead auditor shared a pre-closeout summary of the audit results on 9 July 2025. At that time, the company was given five business days to provide any additional documents or records to help resolve the identified gaps in information or compliance. Subsequent to the pre-closeout meeting, the company provided additional information to assist the lead auditor in making their final assessment of compliance. The lead auditor conducted a final closeout meeting with the company on 22 July 2025.

4.0 Summary of Findings

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

- No Issues Identified – No 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 Corrective and Preventative Action (**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 findings. 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	6.5(1)(c)	Hazard Identification	No Issues Identified	Together, the <i>Operating Management System (OMS) Hazard Identification and Risk Assessment Process, EM Hazard Identification and Risk Assessment Process, Safety Hazard Identification, Assessment and Control Standard, and Corporate Emergency Response Plan (ERP)</i> forms the process for identifying and analyzing hazards relating to emergency management. Interviews and records demonstrate the process has been implemented.
AP-02	OPR	6.5(1)(d)	Hazard Inventory	No Issues Identified	The company's <i>OMS Risk Register</i> serves as the hazard inventory, and contains up-to-date information relating to the hazards relevant for the Emergency and Continuity Management Program (ECMP).
AP-03	OPR	6.5(1)(e)	Risk Assessment	No Issues Identified	Together, the <i>OMS Hazard Identification and Risk Assessment Process, EM Hazard Identification and Risk Assessment Process, [safety] Hazard Identification, Assessment and Control Standard, and Corporate ERP</i> form the process for evaluating risks relating to emergency management. Record sampling confirms the process has been implemented.

Audit Protocol (AP) Number	Regulation	Regulatory Reference	Topic	Finding Status	Finding Summary
AP-04	OPR	6.5(1)(l)	Making Employees and Others Aware of their Responsibilities	No Issues Identified	A suite of documents work together to establish the process for making employees and other persons working with or on behalf of the company aware of their responsibilities: <i>OMS Roles and Responsibilities Standard, OMS Training & Competency Standard, the EM Training & Competency Standard, EM Training & Competency Process, ECMP Exercise Standard, ECMP Exercise Planning Process, and the EM ERP Development & Maintenance Standard</i> . Interviews and records demonstrate the process has been implemented.
AP-05	OPR	6.5(1)(m)	Internal and External Communication	No Issues Identified	The OMS standards and processes, the ECMP standards, and the Corporate ERP work together to communicate information relating to safety, security, and protection of the environment, both internally and externally. Interviews and records demonstrate the process has been implemented.
AP-06	OPR	6.5(1)(o)	Document Management	No Issues Identified	The OMS and ECMP have standards and processes related to document management, which is further detailed in the Corporate and Prairie Sky ERPs. Interviews and records demonstrate the process has been implemented.

Audit Protocol (AP) Number	Regulation	Regulatory Reference	Topic	Finding Status	Finding Summary
AP-07	OPR	6.5(1)(t)	Contingency Planning	No Issues Identified	The ECMP framework for developing contingency plans includes <i>EM Business Continuity Management Process, EM Emergency Response Plan Development and Maintenance Standard</i> , and the <i>Corporate ERP</i> which outlines the Planning-P cycle within the Incident Command System (ICS). Interviews and records demonstrate the process has been implemented.

5.0 Discussion

The Pembina Pipeline Corporation uses an OMS that applies to all of its wholly owned entities, including PKM Cochin ULC. This OMS follows a plan-do-check-act cycle, and is composed of a suite of policies, elements, programs, and plans.

The OMS is supported by policies such as the *Risk Management Policy*, and the *Health, Safety, and Environment Policy*. One of the principles in the latter policy is to maintain an emergency management program.

Fourteen elements sit within the OMS, such as hazard identification and risk assessment, training and competency, communications, document management, etc. Each element is supplemented by standards and processes. All elements apply to the OMS programs.

The company has nine programs. Relevant to this audit, is the ECMP. This program is designed around four components of prevention, planning, response, and recovery. The ECMP is supported by emergency management related standards and processes. Continuity management was incorporated into the emergency management program in 2023, based on learnings from responding to and recovering from the Covid pandemic that occurred in 2020.

Finally, the company has a *Corporate Emergency Response Plan Canada (Corporate ERP)* that is paired with the *Prairie Sky District Cochin Canada Pipeline System Emergency Response Plan (Prairie Sky ERP)*. These ERPs are structured using the ICS. The ICS is a command-and-control structure used by numerous emergency response organizations both within Canada and internationally, to manage emergency incidents. The *Corporate ERP* is the main document that links the ECMP to ICS-related requirements. The *Prairie Sky District Cochin Canada Pipeline System Emergency Response Plan* has information pertaining to the specifics of the Cochin line. During an incident impacting the Cochin Canada Pipeline System, both the Corporate and Prairie Sky ERPs would be activated.

The auditors participated as observers in an emergency exercise conducted by the Pembina Pipeline Corporation, to better understand how these exercises interface with the company's OMS, and how they help the OMS meet the requirements of the OPR. Due to time and availability constraints, the auditors were unable to attend a PKM Cochin specific emergency exercise. However, they were able to attend another emergency exercise of a sister pipeline (Pouce Coupé Pipe Line Ltd.). The company indicated the same management system and emergency management principals are used for both lines. The auditors confirm that the information provided by PKM Cochin ULC in the document review and during interviews was consistent with what was observed in the Pouce Coupé Pipe Line Ltd. emergency exercise. More information can be found in the [CV2526-103 emergency exercise response report](#).

Overall, the company's management system and the emergency management program are well designed. Processes exist for each of the requirements assessed and are both well written and comprehensive. Company staff interviewed were well informed and knowledgeable about the emergency management program as well as their specific roles. The company was able to produce records for all sampling requests, indicating that the processes were being implemented and in use.

6.0 Conclusion

In summary, the CER conducted an operational audit of PKM Cochin ULC related to Emergency Management. All seven audit protocols met the expected outcomes and no issues were identified.

Appendix 1: Audit Assessment

AP-01 Hazard Identification

Finding status	No issues identified
Regulation	OPR
Regulatory reference	Paragraph 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 section 55 programs. • The identification of hazards and potential hazards must include the full lifecycle 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. • The identified hazards and potential hazards have been analyzed 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"> • <i>OMS Framework</i> • <i>OMS Hazard Identification and Risk Assessment Standard</i> • <i>OMS Hazard Identification and Risk Assessment Process</i> • <i>EM Hazard Identification and Risk Assessment Process</i> • <i>OMS REF-Hazard List and Risk Registry</i> • <i>[Safety] Hazard Identification, Assessment and Control Standard</i> • Records including: safe work permits, field level hazard assessments, and several reports that analyzed and identified hazards specific to the Cochin line, when the company first acquired it. <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • INT 1.1 Company Overview • INT 1.2 Hazard Identification and Hazard Inventory • INT 3.3 Manager • INT 4.4 Foremen • INT 5.1 Operators • INT 5.2 Operational Support – Emergency Response East

Finding summary

Together, the *OMS Hazard Identification and Risk Assessment Process*, *EM Hazard Identification and Risk Assessment Process*, *Safety Hazard Identification, Assessment and Control Standard*, and *Corporate ERP* form the process for identifying and analyzing hazards relating to emergency management. Interviews and records demonstrate the process has been implemented.

Detailed Assessment

The company has satisfied the expected outcomes listed above.

Element 1 of the *OMS Framework* is *Hazard Identification and Risk Assessment*. This element has an associated OMS standard and process. The *OMS Hazard Identification and Risk Assessment Standard* describes the hazard identification approach at the OMS level. Programs (including the ECMP program) are to apply the information outlined in the standard. Hazards are identified via a three-pronged approach: input from program-specific work; review of management system related data and information; and a guided brainstorming session. The standard also provides approximately ten categories of hazards from which newly identified hazards are to be classified.

The *Hazard Identification and Risk Assessment Process* outlines the steps required to systematically identify and evaluate the collective hazards, potential hazards, and risks. It lists a set of steps to identify hazards, both annually and as they arise throughout the year.

The ECMP program has its own *EM Hazard Identification and Risk Assessment (HIRA) Process*, which aligns with the OMS standard and process but provides additional emergency management related requirements. This EM process focuses on hazards that could prevent the ECMP from achieving its objectives, from completing specific activities, or that could impact its delivery/implementation. The outputs of these processes are the hazards listed in *OMS REF-001-Hazard List and Risk Registry*.

The safety *Hazard Identification, Assessment and Control Standard* details how health and safety hazards are to be identified and assessed by all workers, including emergency staff. This document uses an energy-based hazard recognition approach to assist workers in identifying hazards, by breaking them down into categories such as pressure, temperature, gravity, motion, mechanical, electrical, etc. It discusses tools to identify hazards such as field level hazard assessments, task hazard assessments, etc. It also discusses a software tool that can be used by workers to report hazards.

The *Corporate ERP* indicates that it uses the ICS to respond to emergencies. Consistent with ICS, the *Corporate ERP* lists the priorities by which the company will respond to an emergency incident, which include: life safety, incident stabilization, and conservation of property and the environment. Using the ICS, the *Corporate ERP* focuses the emergency response around developing objectives, strategies, and tactics to identify and address the hazards that threaten these priorities. The *Corporate ERP* has a section that outlines seven categories of hazards / emergency types. This section explains each of the hazards and the appropriate emergency response. The *Corporate ERP* also lists the various roles in the emergency response and their responsibilities. The safety officer is responsible for identifying safety-related hazardous situations. The planning section chief and their team focus on the next operational period and anticipate potential problems or events, which include hazards, and to develop plans to manage those hazards. For example, the planning section will include an environmental unit lead who identifies all environmental hazards and develops plans to mitigate them. The operations section chief and their team manage all tactical operations within each operational period and is responsible for ensuring the safety of tactical operations (which includes identifying hazards).

Interviews with OMS managers, ECMP supervisors, ECMP advisors, and operations staff yielded responses that were consistent with each other, as well as with the process documents discussed above. During one of the interviews, staff provided a demonstration of the software used to capture reported hazards.

The company provided records as evidence that the process was implemented. Examples of records included Cochin-specific safe work permits, field level hazard assessments, along with hazard and operability studies. The company has also provided records demonstrating that multiple assessments were conducted when Pembina Pipeline Corporation first acquired the Cochin line. It included assessments relating to oil spill response plans, response capability, and emergency protection zones. These assessments identified additional hazards related to the line, and recommendations on how to reduce associated risk.

Therefore, the company has established and implemented a process that is appropriate for the nature, scope, scale, and complexity of its activities, and it is applied to the ECMP across the entire lifecycle of the pipeline.

AP-02 Hazard Inventory

Finding status	No issues identified
Regulation	OPR
Regulatory reference	Paragraph 6.5(1)(d)
Regulatory requirement	A company shall, as part of its management system and the programs referred to in section 55, establish and maintain an inventory of the identified hazards and potential hazards.
Expected outcome	<ul style="list-style-type: none"> • The company has a compliant inventory that is established and maintained. • The inventory includes hazards and potential hazards associated within the company's scope of operations and activities through the lifecycle of the pipelines. • Hazards and potential hazards are identified across all section 55 programs. • The inventory has been maintained, it is current, and is up-to-date including changes made to company operations and activities. • The inventory is being used as part of the risk evaluation and controls processes.
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"> • <i>OMS Risk Register – ECMP Export</i> <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • INT 1.2 Hazard Identification and Hazard Inventory
Finding summary	The company's <i>OMS Risk Register</i> serves as the hazard inventory, and contains up-to-date information relating to the hazards relevant for the ECMP.

Detailed Assessment

The company has satisfied all the expected outcomes listed above.

The company provided an export of the *OMS Risk Register*, filtered for hazards associated with the ECMP. This register is an output of the standards and processes discussed in AP-01. Information relevant to the hazard inventory include date entered, last review date, hazard, status, etc. Examples of hazards relevant to the company's ECMP include extreme weather events, ineffective communications during an emergency, inoperable emergency response equipment, etc. The last review date was in 2025, which indicates that the register is being maintained. The latter half of this *OMS Risk Register* evaluates the risks and identifies controls for each of the hazards. The hazards identified in this *OMS Risk Register* are carried through to the *Corporate ERP*.

Interviews with OMS managers and ECMP supervisors yielded responses that were consistent with the content within the *OMS Risk Register*. Interviewees were aware of the hazards listed on the register and were able to provide background information on each of the hazards when asked.

Thus, the company has established and maintained an up-to-date inventory of hazards, pertaining to the ECMP, and this inventory is being used as part of the risk evaluation and controls processes.

AP-03 Risk Assessment

Finding status	No issues identified
Regulation	OPR
Regulatory reference	Paragraph 6.5(1)(e)
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 evaluating the risks associated with the identified hazards and potential hazards, including the risks related to normal and abnormal operating conditions.
Expected outcome	<ul style="list-style-type: none"> • The company has a compliant process for evaluating risks that is established and implemented. • The method(s) for risk evaluation confirm that the risks associated with the identified hazards (related to normal and abnormal operating conditions) are based on referenced regulatory standards and are appropriate for the nature, scope, scale, and complexity of the company's operations, activities, and are connected to the purposes and intended outcomes of the section 55 programs. • Risks are evaluated for all hazards and potential hazards and include normal and abnormal conditions. • Risk levels are monitored on a periodic basis and as needed and re-evaluated for changing circumstances. • Risk tolerance/acceptance criteria is determined for all hazards and potential hazards.
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"> • <i>OMS Framework</i> • <i>OMS Hazard Identification and Risk Assessment Standard</i> • <i>OMS Hazard Identification and Risk Assessment Process</i> • <i>EM Hazard Identification and Risk Assessment Process</i> • <i>OMS REF-Hazard List and Risk Registry</i> • <i>Cochin Pipeline Response Capacity Assessment</i> • <i>Cochin Pipeline EPZ Report</i> • <i>Cochin Pipeline EM & HIRA Assessment</i> <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • INT 1.1 Company Overview • INT 1.3 Risk Assessment • INT 3.3 Manager • INT 4.4 Foremen • INT 5.1 Operators • INT 5.2 Operational Support – Emergency Response East

Finding summary

Together, the *OMS Hazard Identification and Risk Assessment Process*, *EM Hazard Identification and Risk Assessment Process*, [safety] *Hazard Identification, Assessment and Control Standard*, and *Corporate ERP* form the process for evaluating risks relating to emergency management. Record sampling confirms the process has been implemented.

Detailed Assessment

The company has satisfied all the expected outcomes listed above.

Many of the documents discussed in AP-01, that are used to identify and analyze hazards, are the same documents that are used to evaluate risks associated with those hazards. The *OMS Hazard Identification and Risk Assessment Standard* indicates the scope of application is for both normal and abnormal operating conditions. The following three documents work together to evaluate risks at the OMS level and the ECMP level: *OMS Hazard Identification and Risk Assessment Standard*, *OMS Hazard Identification and Risk Assessment Process*, and the *EM Hazard Identification and Risk Assessment Process*. The standard outlines the four stages relating to hazard identification and risk management:

- 1 – hazard identification;
- 2 – risk assessment;
- 3 – risk mitigation; and
- 4 – risk governance.

The second stage of risk assessment is relevant to AP-03.

This standard defines risk as the likelihood of failure multiplied by the severity of the failure and is illustrated by the risk matrix. Likelihood has five levels ranging from 'rare' to 'almost certain'. Severity also has five levels, against one or more of the following categories:

- health and safety;
- environmental and regulatory;
- financial;
- operational; and
- reputation.

The standard also defines the company's risk tolerance. Risk must be assessed both before and after controls are implemented. Residual risk (the risk after controls are implemented) can be categorized into four levels, ranging from low to very high. The level of residual risk defines whether or not the associated activity may proceed, as well as who must be notified, when they must be notified, and other actions as required. For example, very high risk, and high risk requires notification in writing to the applicable senior leader, who will determine the next steps. The *OMS Hazard Identification and Risk Assessment Process* indicates the steps and associated responsibilities, as they relate to risk assessment. Hazards and associated risks are assessed, at minimum, once a year. However, they may be reviewed sooner, depending on triggers such as audit findings, regulatory non-compliance, incidents, etc.

The *EM Hazard Identification and Risk Assessment Process* provides additional instruction as it relates to evaluating risk associated with hazards specific to the ECMP. It requires an *Emergency Management Capability Assessment*, where new and/or existing controls are evaluated to reduce the severity of the risk. This process requires the assessment to be completed before, during, and after an emergency. Consequence modelling may be used to better understand the: potential effects of a hazard, probable worst-case scenarios, emergency planning zone determinations, suitable

positioning of emergency response equipment, suitable location of muster points for evacuation procedures, etc.

In the *OMS Risk Register*, for each hazard, the register provides information on the type of risk (e.g., abnormal, process, etc.), risk descriptor (e.g., operational, health and safety, environment, and regulatory) the current controls, and both the inherent and residual likelihood, severity, and risk. As it relates to the ECMP, the register contains one hazard with high residual risk. This relates to extreme weather events such as earthquakes, wildfires, flood, and drought.

The *Corporate ERP* lists emergency types that sufficiently correspond to the hazards listed in the *OMS Risk Register*. For each emergency type, the *Corporate ERP* provides an overview of an appropriate response. To classify emergency incidents, the *Corporate ERP* uses the aforementioned risk matrix but also considers the likelihood of the incident escalating. Risks related to incidents are monitored during emergency response by the safety officer and safety watch, and at minimum are re-evaluated during each operational period (which varies but is typically 12 or 24 hours). The safety officer will assess the risks of safety-related hazards and may develop plans to mitigate the risk. Examples of these plans include a safety plan and a medical plan. Other roles within ICS that assess and monitor risk include the planning section chief and the operations section chief along with their respective teams. For example, the environmental unit lead within the planning section will assess the risk associated with environmentally related hazards and develop plans to mitigate the risk. Examples of plans may include air monitoring plans, spill management plans, wildlife management plans, etc. The operations section will implement those plans into its operational activities.

The company provided several reports to demonstrate implementation. These included a variety of assessments conducted in 2020 when the Cochin line was purchased to determine the risks and controls related to pipeline emergencies. One report evaluated the risks associated with worst case spill scenarios, current control points, accessible response equipment, current agreements with oil spill response organizations, and provided recommendations on how to improve the response capacity. Another report calculated an emergency planning zone of 200 metres (m) based on the emergency scenario of a release causing a pool of condensate and the possibly of a fire. A third report assessed the Cochin line with respect to the company's EM processes and regulatory requirements, identified hazards, associated risks, and required controls.

During interviews, staff indicated that most of the recommendations generated from these reports were implemented. Interviews with company staff yielded responses that were consistent with the processes discussed above. They were able to discuss the risk assessment that is conducted on the emergency hazards identified in the *OMS Risk Register*, as well as hazards that arise during emergency response.

Thus, the company has established and implemented a process to evaluate risks, and the method is appropriate for the nature, scope, scale, and complexity of the EM program. The process defines risk tolerance criteria and requires risk to be monitored at a defined frequency.

AP-04 Making Employees and Others Aware of their Responsibilities

Finding status	No issues identified
Regulation	OPR
Regulatory reference	Paragraph 6.5(1)(l)
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 making employees and other persons working with or on behalf of the company aware of their responsibilities in relation to the processes and procedures required by this section.
Expected outcome	<ul style="list-style-type: none"> • The company has a compliant process for making employees and other persons aware of their responsibilities. • Responsibilities are defined for employees and those other persons working on behalf of the company in relation to the processes and other requirements for paragraphs 6.5(1)(a to x) of the OPR.
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"> • <i>Health, Safety, & Environment Policy</i> • <i>Enterprise Risk Management Policy</i> • <i>Information Management Policy</i> • <i>OMS Framework</i> • <i>OMS Roles and Responsibilities Standard</i> • <i>ECMP</i> document • <i>OMS Training & Competency Standard</i> • <i>EM Training & Competency Standard</i> • <i>EM Training & Competency Process</i> • <i>ECMP Exercise Standard</i> • <i>ECMP Exercise Planning Process</i> • <i>Corporate ERP</i> <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • INT 2.1 Making Employees and Others Aware of their Responsibilities • INT 3.3 Manager • INT 4.4 Foremen • INT 5.1 Operators • INT 5.2 Operational Support – Emergency Response East
Finding summary	A suite of documents work together to establish the process for making employees and other persons working with or on behalf of the company aware of their responsibilities: <i>OMS Roles and Responsibilities Standard</i> , <i>OMS Training & Competency Standard</i> , the <i>EM Training & Competency Standard</i> , <i>EM Training & Competency Process</i> , <i>ECMP Exercise Standard</i> , <i>ECMP Exercise Planning Process</i> , and the <i>EM ERP Development & Maintenance Standard</i> . Interviews and records demonstrate the process has been implemented.

Detailed Assessment

The company has satisfied the expected outcomes listed above.

The company makes employees aware of their responsibilities, as they relate to the OMS and the ECMP through several mechanisms within the management system.

The *Health and Safety Policy* specifies high-level principles to support the company's commitment to protecting the health and safety of workers, the public and safeguarding the environment affected by their activities. One of these principles relates to developing clearly defined responsibilities, competency requirements and training to provide personnel the ability to perform their duties in a manner that is safe, meets or exceeds legal and regulatory requirements, and ensures the safety of people, assets, and the environment. Company staff must sign-off on this and other corporate policies once a year, indicating that they have read and understand them, and that they must comply with them.

Element 4 of the *OMS Framework* is Roles and Responsibilities. The corresponding *OMS Roles and Responsibilities Standard* sets requirements relating to identifying roles and responsibilities, and accountabilities throughout the OMS, defining a supporting governance structure, and providing training to employees.

OMS policies, standards, processes, and program documents all contain a section that identifies the roles and responsibilities of particular positions, as it relates to the specific OMS component. For example, in the *ECMP* document, roles and responsibilities are listed for both program execution and governance. The manager of security, emergency & continuity management, the supervisor of resilience & performance management, advisors, ECMP support personnel, and operations staff all have defined responsibilities as they relate to the ECMP.

The *OMS Roles and Responsibilities Standard* indicates that the OMS Steering Committee (executive leadership) governs expectations and risk tolerance, the OMS Steward Committee (program owners) governs accountability and the OMS working group (program leads) governs execution. All OMS standards and processes have a section that specifies the roles and responsibilities as they relate to the standard and/or process. For example, the *ECMP* document provides governing roles to the accountable officer, executive leadership, and the ECMP owner. The *ECMP* document also describes:

- the program's goals, objectives, and processes;
- the four program components of prevention and mitigation, preparedness, response, and recovery;
- the minimum ECMP management controls relating to schedule, communications, reporting, risk management, assurance management, training and competency management, and corrective action management; and
- a list of associated standards and procedures.

Element 7 of the OMS is Training and Competency. Associated training requirements are defined in documents such as the *OMS Training & Competency Standard*, the *EM Training & Competency Standard*, *EM Training & Competency Process*, *ECMP Exercise Standard*, *ECMP*, and the *Exercise Planning Process*. These documents indicate for each response team, requirements related to required courses, participation in emergency exercises and drills, and assessments, as well as specifics as to how emergency exercises are to be developed and rolled out.

The *Corporate ERP* provides more detailed direction related to the roles and responsibilities of various roles before, during, and after an emergency. For example, it outlines:

- emergency exercise and training requirements for emergency management staff;
- mutual aid agreements, liaison and public awareness requirements;
- how to activate an emergency;
- regulatory notification requirements;
- each ICS role involved in responding to an emergency, as well as its associated responsibilities, reporting structure, and ICS tools used, including documentation and forms;
- how to coordinate other organizations within the emergency response;
- external and internal communication requirements; and
- post incident and recovery activities.

In the event of an emergency, those working with or on behalf of the company could include municipalities, first responders (fire departments, police, and ambulance), mutual aid partnerships with third parties, etc. As mentioned in the discussion section, ICS is commonly used by organizations involved in emergency response, thus, the use of this system makes it easier for supporting organizations to join in the emergency response. Supporting organizations can be inserted into the response without additional training or familiarization. These organizations are also invited to participate in emergency exercises that the company conducts. The *Engagement and Liaison Standard* describes the Community Awareness and Emergency Response (**CAER**) program, which provides hazards and emergency response information to first responders and local authorities. The company also uses a local authority consultation form to collect information about the role and response capabilities of the municipalities and their first responders.

The *EM ERP Development & Maintenance Standard* indicates that bridging documents may be used to link company ERP response practices to another ERP. This could be used during asset divestiture, for company assets operated by a third-party, and/or by contractors during construction or maintenance activities. These bridging documents help make third-parties aware of their responsibilities as they relate to the emergency program.

Interviews with company staff yielded responses that were consistent with the processes discussed above. Staff indicated that emergency exercises were integral to teaching and communicating the responsibilities related to emergency response to relevant internal and external personnel.

To determine implementation of the process documents listed above, the auditors sampled a variety of records pertaining to ECMP competency profiles, training status, training records for interviewees, records generated during a functional emergency exercise, and the corrective action log to track the continual improvement opportunities identified during the exercise. The company was able to provide all records.

Therefore, the company has established and implemented a process for making employees and others aware of their responsibilities, and responsibilities have been defined for those working under processes related to subsection 6.5(1) of the OPR.

AP-05 Internal and External Communication

Finding status	No issues identified
Regulation	OPR
Regulatory reference	Paragraph 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. • Internal and external communication is occurring and it is adequate for the management system and section 55 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"> • <i>OMS Communications Standard</i> • <i>OMS Communications Process</i> • <i>EM Program Communications Standard</i> • <i>EM Engagement and Liaison Standard</i> • <i>Cochin Public Information Package 2024</i> • example of a <i>Local Authority Consultation</i> <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • INT 1.1 Company Overview • INT 2.2 Internal and External Communication • INT 3.3 Manager • INT 4.4 Foremen • INT 5.1 Operators • INT 5.2 Operational Support – Emergency Response East
Finding summary	The OMS standards and processes, the ECMP standards, and the Corporate ERP work together to communicate information relating to safety, security, and protection of the environment, both internally and externally. Interviews and records demonstrate the process has been implemented.

Detailed Assessment

The company has satisfied the expected outcomes listed above.

Element 8 of the *OMS Framework* is communications. Communication requirements cascade from *OMS Communications Standard* and *OMS Communications Process* to the *EM Program Communications Standard*, and the *EM Engagement and Liaison Standard*.

The *OMS Communications Standard* specifies a 3-tiered system based on the target audience:

- Tier I - communication internal to the company and within the OMS or program discipline;
- Tier II - communication internal to the company but across one or more programs, or business unit; and
- Tier III - communication external to the company.

The *OMS Communications Process* involves the following steps:

- identify the need for communication;
- identify the target audience;
- develop the message;
- identify the communication tool to relay the message;
- create a record of the communication;
- monitor and maintain; and
- measure the effectiveness.

The specifics of each step are dependent on the audience Tier level.

The *EM Program Communications Standard* outlines the mechanisms to communicate EMCP-related information both internally and externally. Examples of internal communication mechanisms include controlled documents, training materials and deliveries, emergency related alerts, advisories, or notifications. Examples of external communication mechanisms include information packages, emergency interruption notifications, public involvement programs and engagement, and liaison activities.

The *EM Engagement and Liaison Standard* provides minimum expectations for ECMP-led interactions and collaborations with external stakeholders, for the purposes of strengthening emergency preparedness through education and awareness activities. Examples of activities discussed in this standard relate to emergency response plans, public involvement programs, CAER program (which provides hazards and emergency response information to first responders and local authorities); damage prevention and public awareness program, and mutual aid partnerships with third parties to enhance response capabilities.

The *Corporate ERP* also has a section on internal and external communication requirements during an emergency. Internal communication involves the incident site, the control centre, the incident command post, and the emergency coordination centre. Status updates and the sharing of incident-related information will follow the ICS chain of command. External communication includes first responders, other levels of government and regulatory agencies, members of the public, Indigenous Peoples, media, etc. ICS roles such as the liaison officer, the public information officer, and the public protection branch director are assigned external communication responsibilities. Redacted versions of the Corporate and Prairie Sky *ERPs* are posted on the company's website and accessible to the public.

Interviews with company staff yielded responses that were consistent with each other, as well as with the process documents discussed above. For example, interviewees were able to discuss the CAER program, resources on the company's internal and external website, and liaison activities.

The company provided two samples of records related to external communication. The first record is a *Cochin public information package* that contains a brochure with information related to emergency management, including emergency contact numbers, what to do in the event of an emergency, signs of a product release, potential hazards, and a map of the pipelines. The second record is a local authority consultation form where the company was gathering information relating to the capacity and preference of a local authority to respond in the event of an emergency situation.

Thus, the company has a communication process that defines methods for both internal and external communication. The company is communicating messages relating to safety, security, and protection of the environment both internally and externally, and the communications are adequate for the ECMP.

AP-06 Document Management

Finding status	No issues identified
Regulation	OPR
Regulatory reference	Paragraph 6.5(1)(o)
Regulatory requirement	The company shall, as part of its management system and the programs referred to in section 55, establish and implement a process for preparing, reviewing, revising, and controlling those documents, including a process for obtaining approval of the documents by the appropriate authority.
Expected outcome	<ul style="list-style-type: none"> • The company has a compliant process that is established and implemented. • The methods for preparing, reviewing, revising, and controlling those documents are defined for the management system and the section 55 programs. • Company personnel, who have a defined need, have adequate access to the identified documents. • Documents are managed and controlled using the defined process.
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"> • <i>OMS Framework</i> • <i>OMS Document Control Management Standard</i> • <i>OMS Document Control – Life cycle Management Process</i> • <i>EM Document Control and Records Management Process</i> • <i>ECMP PCDS Site – Screen Capture</i> <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • INT 1.1 Company Overview • INT 2.3 Document Management • INT 3.3 Manager • INT 4.4 Foremen • INT 5.1 Operators • INT 5.2 Operational Support – Emergency Response East
Finding summary	The OMS and ECMP have standards and processes related to document management, which is further detailed in the Corporate and Prairie Sky ERPs. Interviews and records demonstrate the process has been implemented.

Detailed Assessment

The company has satisfied the expected outcomes listed above.

Element 5 of the *OMS Framework* is document control. Document control requirements cascade from *OMS Document Control Management Standard*, *OMS Document Control – Lifecycle Management Process*, to *EM Document Control and Records Management Process*.

The *OMS Document Control Management Standard* sets minimum requirements for aligning the content of controlled documents according to the document hierarchy, standardized document naming conventions, review cycles, approval, and access. The *OMS Document Control – Lifecycle Management Process* sets requirements related to initiating, creating, storing, reviewing, approving, publishing, maintaining, retiring, and disposing of controlled documents. This includes a requirement for the document to be formally approved by the appropriate authority. The process also defines a controlled document as one which describes a requirement, process, or procedure that is essential to the organization and could have a significant impact on the management system, compliance, health and safety of people, assets, and the environment. Control is required to ensure that people who need access to the document to perform their activities have the most current version, which has been approved by the organization. The *EM Document Control and Records Process* discusses how uncontrolled documents pertaining to the ECMP are to be managed.

The *EM Emergency Response Plan Development & Maintenance Standard* indicates how ERPs are to be developed and maintained. The *Corporate ERP* and *Prairie Sky ERP* are available to staff through a variety of electronic means such as the company intranet site and automatic downloads to company electronic devices when within range. Formal hard copies are stored in locations specified in the respective ERP. When a new version of an ERP is released, a formal process exists where the outdated ERP is destroyed, replaced by the new ERP, and the completion of this process is attested to by the assigned personnel.

The *Corporate ERP* indicates that ICS forms completed during an emergency response are to be logged in the virtual command system, submitted to the ECMP and used for the post incident review. It also lists the types of forms to be used, and the ICS role responsible for that form.

All controlled documents have an approval methodology requiring a senior manager to formally sign off.

Interviews with company staff yielded responses that were consistent with each other, as well as with the process documents discussed above. For example, interviewees knew where to go to access up-to-date information, understood the process to update hard copies of the ERP, and confirmed that confidential information related to the ERP is being properly protected.

All standards and processes reviewed as part of this audit conformed to the company's document controls. Screenshots of the document management software illustrated how documents in the ECMP are stored and associated data are stored and managed. Examples of fields included document number, approval date, review date, status, responsible personnel, etc. The company's Virtual Command System used during emergency response, was also demonstrated.

Therefore, the company has established and implemented a process, which indicates the methods for preparing, reviewing, revising, and controlling key documents. Relevant personnel have access to these documents.

AP-07 Contingency Planning

Finding status	No issues identified
Regulation	OPR
Regulatory reference	Paragraph 6.5(1)(t)
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 contingency plans for abnormal events that may occur during construction, operation, maintenance, abandonment, or emergency situations.
Expected outcome	<ul style="list-style-type: none"> • The company has a compliant process that is established and implemented. • The company has methods for developing contingency plans for abnormal events that include construction, operations, maintenance, abandonment, and emergency situations. • The company's contingency plans are developed, maintained, and apply to all section 55 programs. • The company has the ability to implement contingency plans when required, for one or all section 55 programs at the same time.
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"> • OMS Framework • <i>EM Emergency Response Plan Development and Maintenance Standard</i> • <i>EM Business Continuity Management Process</i> • <i>EM Corrective Action and Program Improvement Process</i> • <i>Corporate ERP Canada</i> • <i>Prairie Sky District Cochin Canada Pipeline ERP</i> • <i>Cochin Canada CP Bridging Document</i> <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • INT 1.1 Company Overview • INT 3.1 Contingency Planning • INT 3.3 Manager • INT 4.4 Foremen • INT 5.1 Operators • INT 5.2 Operational Support – Emergency Response East
Finding summary	The ECMP framework for developing contingency plans includes <i>EM Business Continuity Management Process</i> , <i>EM Emergency Response Plan Development and Maintenance Standard</i> , and the <i>Corporate ERP</i> which outlines the Planning-P cycle within ICS. Interviews and records demonstrate the process has been implemented.

Detailed Assessment

The company has satisfied the expected outcomes listed above.

Outside of the ECMP, contingency plans are required to mitigate abnormal events that may occur during construction, operation, maintenance, and abandonment situations. As such, the development of contingency plans may also be triggered at any time through the following mechanisms:

- OMS 9.1 Assurance Standard;
- OMS 1.1 Hazard Identification and Risk Assessment Process;
- EM-PRS-001 Corrective Action and Program Improvement Process; and
- EM-PRS-007 Hazard Identification and Risk Assessment Process.

The ECMP framework for developing contingency plans lies with three key documents: *EM Business Continuity Management Process*, *EM Emergency Response Plan Development and Maintenance Standard*, and the *Corporate ERP*.

The *EM Business Continuity Management Process* outlines business continuity activities that identify critical business processes across the organization, the necessary timelines in which they need to be recovered or restored, and potential recovery strategies that may be used in the interim to reduce the level of disruption to normal operations. It includes six key steps that result in a business continuity plan that is tested for efficacy during an emergency exercise and continually improved over time.

The *EM Emergency Response Plan Development and Maintenance Standard* outlines how ERPs are to be developed and maintained. The *Corporate ERP*, in turn, lists types of emergencies and the appropriate response. The *Corporate ERP* also links to the ICS. The ICS uses methodology called the 'Planning-P' which is a sequence of meetings, work periods, and briefings that comprise an operational planning cycle. The cycle involves the identification of emergency response objectives, strategies, tactics, and produces an Incident Action Plan (**IAP**). The IAP includes various contingency plans, tailored to the specifics of the emergency. Examples of contingency plans include: medical plan, incident safety plan, decontamination plan, transportation plan, wildlife plan, waste management plan, air monitoring plan, etc. Details pertaining to the 'Planning-P' are outlined in the *Command Post and Role Specific Guides booklet*.

Interviews with company staff yielded responses that were consistent with each other, as well as with the process documents discussed above. For example, interviewees were aware of and able to discuss specifics relating to the ERP documents, the 'Planning-P' cycle, and the contingency plans contained within the incident action plan.

Examples of records reviewed include the Corporate ERP, the Prairie Sky ERP, and contingency plans developed for the emergency exercise conducted in May.

Therefore, the company has established and implemented a process for developing contingency plans for abnormal events including emergency situations, and the company can implement this process for multiple section 55 programs simultaneously.

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)
CAER	Community Awareness and Emergency Response
ECMP	Emergency and Continuity Management Program
EM	Emergency Management
EPZ	Emergency Protection Zone
ERP	Emergency Response Plan
OMS	Operating Management System
OPR	<i>Canadian Energy Regulator Onshore Pipeline Regulations</i> (SOR/99-294)
The company	PKM Cochin ULC