



Canada Energy
Regulator

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Final Audit Report

Genesis Pipeline Canada Ltd.

Emergency Management

CV2425-002

File 5070192

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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 Genesis Pipeline Canada Ltd. (**Genesis or the company**) between 17 April 2024 and 31 July 2024. The topic and focus area of the audit was Emergency Management. 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.

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

- Hazard identification;
- Risk assessment;
- Identification and delegation of roles and responsibilities;
- Communication of hazards and risks and emergency response procedures to those who need to be aware;
- Contingency planning; and
- The management of documentation.

Of the seven audit protocols that were assessed, six were found to have no issues identified, while one was found to be non-compliant with regulatory requirements. The non-compliance was due to the hazard inventory for Genesis' CER-regulated pipelines not being included in the corporate risk program. It was found that more than one hazard inventory list exists and it's unclear how they relate. The summary of findings can be found in [Table 2](#).

Within 30 calendar days of receiving the Final Audit Report, the company shall file with the CER a Corrective and Preventive Action (**CAPA**) plan that outlines how the non-compliant finding will be resolved. The CER will monitor and assess the implementation of this CAPA plan to confirm that it is completed in a timely manner.

Note that all findings are specific to the information assessed at the time of the audit as related to the audit scope.

While a non-compliant finding exists, the CER is of the view the company can still construct, operate, and abandon pipelines in a manner that will preserve the safety of persons, the environment, and property.

The Final Audit Report will be made public on the CER website.

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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 Genesis between 17 April 2024 and 31 July 2024.

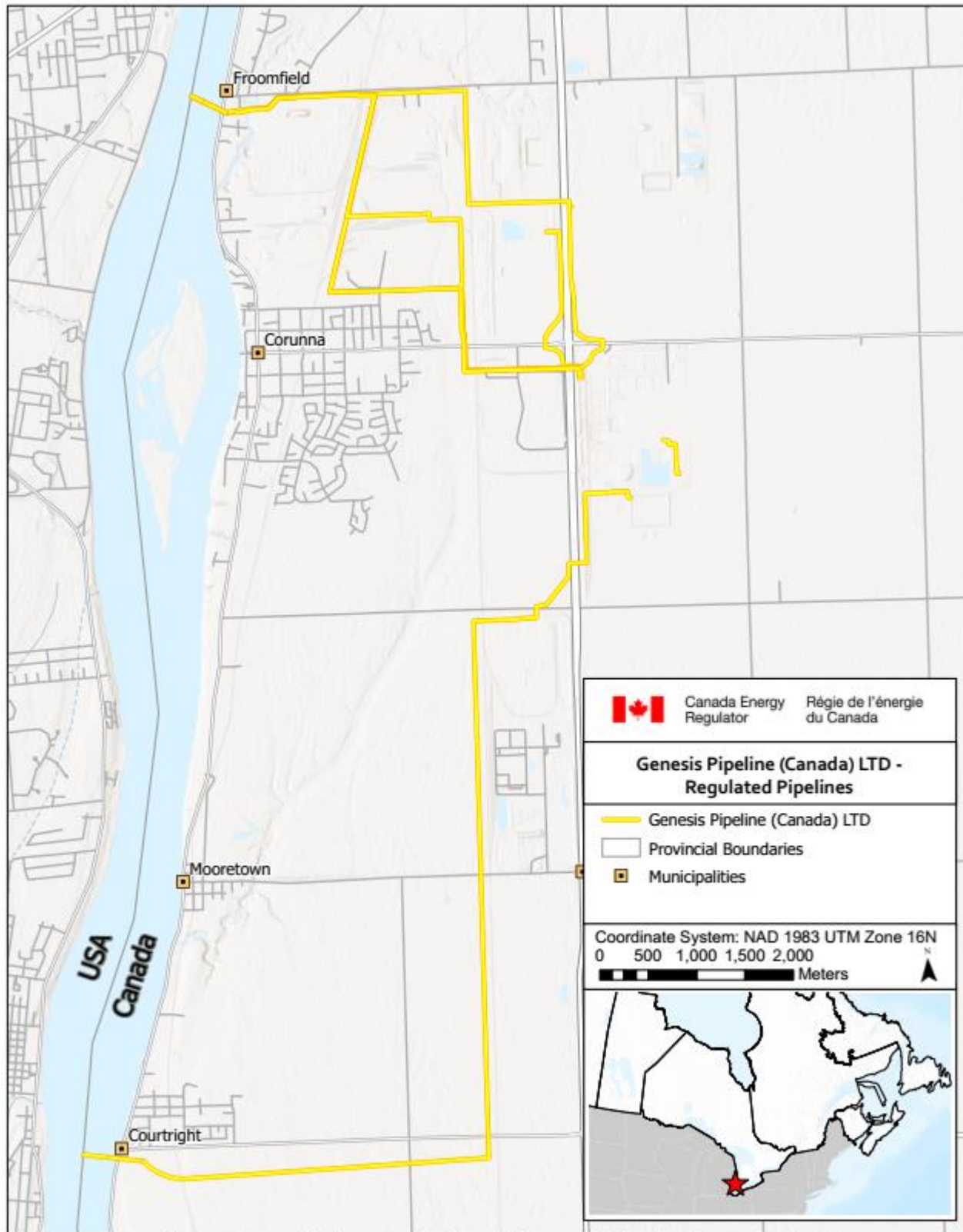
1.2 Description of Audit Topic

The CER expects companies to have a fully established and implemented Emergency Management Program. This is expected to proactively address the various scenarios, contingencies, and related actions that must 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 OPR section 55 programs as necessary to have robust controls in place to manage and mitigate any upset or abnormal conditions that may take place.

1.3 Company Overview

Genesis is a wholly owned subsidiary of NOVA Chemicals Corporation (**NOVA**). Its CER-regulated assets include approximately 44 kilometres (**km**) of pipeline, which includes approximately 30 km of operational pipelines transporting natural gas liquids, ethane, and brine. The Genesis pipeline system connects NOVA's ethylene plant in Corunna, Ontario with NOVA's polyethylene facilities in Corunna and Mooretown along with customers in Ontario and Michigan. Segments of the Genesis pipeline transport natural gas liquids to and from NOVA's Corunna plant and storage facilities located in Michigan.

The map 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, August, 2024, Last updated on Aug 23

2.0 Objectives and Scope

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

- Hazard identification;
- Risk assessment;
- Identification and delegation of roles and responsibilities;
- Communication of hazard and risks and emergency response procedures to those who need to be aware;
- 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

The auditors assessed compliance through:

- Document reviews;
- Record sampling; and
- Interviews.

A list of documents reviewed, records sampled, and a list of individuals interviewed during the audit are retained on file with the CER.

An audit notification letter was sent to the company on 9 April 2024 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 10 April 2024 and followed up on 17 April 2024 with a

meeting with the company staff to discuss the plans and schedule for the audit. Document review began on 21 May 2024 and interviews were conducted between 10 June 2024 and 14 June 2024. In accordance with the established CER audit process, the lead auditor shared a pre-closeout summary of the audit results on 8 July 2024. 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. After 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 31 July 2024.

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 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	NOVA’s Management System (MS) directs its facilities and pipeline operators to use the corporate programs and processes for hazard identification and control. Genesis demonstrated to the CER auditors that it is using the corporate process for the identification of hazards. The consequence evaluation of hazards and risks are then used to develop appropriate controls, including emergency response plans for the EM Program.

Audit Protocol (AP) Number	Regulation	Regulatory Reference	Topic	Finding Status	Finding Summary
AP-02	OPR	6.5(1)(d)	Hazard Inventory	Non-compliant	Genesis has established and is maintaining an inventory of hazards and potential hazards related to its CER-regulated pipelines that addresses all section 55 program areas. The company also provided evidence that the inventory is reviewed annually. However, Genesis' hazards and potential hazards are not yet integrated into the NOVA corporate risk program. More than one hazard inventory list exists and it's unclear how they relate.
AP-03	OPR	6.5(1)(e)	Risk Assessment	No Issues Identified	NOVA's MS directs its facilities and pipeline operators to use the corporate programs and processes for risk assessment that were deemed compliant. Genesis demonstrated to the CER auditors that it uses this process for assessing risks. The consequence evaluation of these risks is then used to develop emergency response plans for the EM Program.
AP-04	OPR	6.5(1)(l)	Making Employees and Others Aware of their Responsibilities	No Issues Identified	Genesis demonstrated that it follows NOVA corporate guidance and uses corporate processes to ensure that employees and others who work on behalf of the company are made aware of their roles and responsibilities, including those during an emergency.

Audit Protocol (AP) Number	Regulation	Regulatory Reference	Topic	Finding Status	Finding Summary
AP-05	OPR	6.5(1)(m)	Internal and External Communications	No Issues Identified	Genesis demonstrated that it has implemented the internal and external communications processes established by NOVA for the dissemination of information related to safety, security, and protection of the environment. It also demonstrated that it has integrated NOVA's required communication strategies into the Emergency Services Program for the development of Emergency Response Plans and communicating them to those who need to know.
AP-06	OPR	6.5(1)(o)	Document Management	No Issues Identified	NOVA's corporate MS directs its corporate offices and facility operations to use the corporate programs and processes for document control. Genesis provided evidence that it follows that process while providing specific guidance within facility documents on how often they are to be reviewed and by whom.
AP-07	OPR	6.5(1)(t)	Contingency Planning	No Issues Identified	Genesis demonstrated that it has implemented the process established by NOVA under Emergency Services Program for developing contingency plans for abnormal events. Genesis also demonstrated that this process is linked to the corporate risk assessment process.

5.0 Discussion

Genesis follows the MS of its owner company, NOVA. Within NOVA's MS, it clearly states that the MS applies to Manufacturing East (**ME**) facilities and pipelines, which includes Genesis' CER-regulated pipelines.

NOVA's MS provides governance over fourteen program areas. For this audit, parts of the Responsible Care (**RC**) Risk, Emergency Services, and Contractor Safety Management programs were assessed.

The OPR requires CER-regulated facilities to have an EM Program. NOVA's Emergency Services Program, which applies to ME and Genesis, includes all the elements of the EM Program required by the OPR.

The one non-compliance identified during this audit is associated with Genesis' hazard inventory process where Genesis' hazards are not yet integrated into the NOVA corporate risk program. It was found that more than one hazard inventory list exists and it's unclear how they relate.

Despite the non-compliance, Genesis appears committed to continually improving their management system and associated programs. At the time of writing, the management system is being transitioned to better align with RC, which is another industry standard that applies management systems principles. The company anticipates being RC certification ready in the fall of 2025.

Overall, Genesis appeared to have a well-functioning management system as it relates to its emergency management program.

6.0 Next Steps

The company is required to resolve the non-compliant finding through the implementation of a CAPA plan. The next steps of the audit process are as follows:

- Within 30 calendar days of receiving the Final Audit Report, the company shall file with the CER, a CAPA plan that outlines how the non-compliant finding will be resolved.
- The CER will monitor and assess the implementation of the CAPA plan to confirm that it is completed:
 - on a timely basis; and
 - in a safe and secure manner that protects people, property, and the environment.
- Once implementation is completed, the CER will issue an audit closeout letter.

7.0 Conclusion

In summary, the CER conducted an operational audit of Genesis related to Emergency Management. Out of a total of seven audit protocols, six were classified as no issues identified, and one was found to be non-compliant resulting in an audit score of 86 percent. The non-compliance was due to the fact that the hazard inventory for Genesis' CER-regulated pipelines has not been incorporated into the corporate risk program, which means that NOVA, ME, and Genesis have more than one hazard inventory and it's unclear how the hazard inventories relate.

While a deficiency exists, the CER auditors do not believe there are any serious risks to the Genesis Emergency Management Program based on the information reviewed for this audit.

Genesis is expected to resolve this deficiency through the implementation of a CAPA plan. The CER will monitor and assess the implementation of this CAPA plan and issue an audit closeout letter upon its completion.

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 analyzed 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"> • NOVA Responsible Care (RC) 14001 Management System • RC Risk Program • Emergency Services Program • Operational RC Risk Assessment Process • Operational Risk Assessment Tool • Job Hazard Analysis Process • Hazard Recognition and Control Procedure • Safety Interactions Procedure • Workplace Hazard Assessment Tool – In Field • Manufacturing East Pipeline Management System • Access to the Enablon Risk Register System • Manufacturing East Emergency Response System Manual <p>The following interview is related to this finding:</p> <ul style="list-style-type: none"> • Interview 1.2 - AP-01 - 6.5(1)(c) - Identifying and analyzing hazards

Finding summary

NOVA's MS directs its facilities and pipeline operators to use the corporate programs and processes for hazard identification. Genesis demonstrated that it is using the corporate approved process for the identification of hazards and risks. The consequence evaluation of hazards and risks are then used to develop appropriate controls, including the emergency response plans for the EM Program.

Detailed Assessment

Genesis has satisfied the expected outcomes above.

Genesis has established and implemented a process to identify hazards, and the methods are appropriate for the nature, scale, and complexity of the company's activities.

Within NOVA's MS, a hazard is defined as: a condition, situation, practice, behaviour, or object that has the potential to cause or be a source of harm (including injury, disease, death, environmental, property, and equipment damage).

NOVA's MS states that the identification of hazards, aspects, and threats is the starting point of all preventative efforts at NOVA. It goes on to say the Emergency Response Plans (**ERPs**) are to be based on the results of the RC Risk Program. The Emergency Services Program document also states that ERPs for the EM Program are to be developed based on the consequence assessments completed under the corporate RC Risk Program. The Manufacturing East Emergency Response System (**MEERS**) Manual further elaborates that hazard-specific emergency response procedures / guidelines shall be developed if the consequences of the hazards identified are outside the scope of normal operations.

Genesis demonstrated through document and record review and during interviews that hazard identification and analysis is used throughout the full cycle of emergency management: prevention, preparedness, response and recovery. Outputs of hazard analysis are used to develop mitigation strategies and, if necessary, emergency response procedures and guidelines. If a hazard is identified during the response to an emergency, the evaluation is guided by the Emergency Response Team's Incident Commander and the Emergency Operations Centre Management Group.

The requirements for NOVA's EM Program, which applies to ME and Genesis, are described in its Emergency Services Program document.

The RC Risk Program document states that it is focused on developing and managing RC risk through hazard identification and risk assessment techniques. This document is applicable to corporate functions such as Emergency Services and Security and to several facilities which includes Genesis and its CER-regulated pipelines. The RC Risk Program document dictates that facility leaders are responsible for the effective implementation of the RC Risk process within their facility. The NOVA MS states that facilities are to use the corporate risk assessment program and associated procedures for actions to address risks and opportunities. As such, Genesis uses NOVA's corporate process to identify hazards, conduct risk assessments, and develop controls.

The RC Risk document directs that hazard identification is to be ongoing during job planning, job execution, and/or as part of formal risk assessments. It describes the process of reviewing a circumstance, job or activity and the work area to spot potential sources of harm or damage and adopt appropriate controls. Hazard assessment tools to be used include:

- Job Hazard Analysis;
- Field Level Hazard Assessments;
- Toolbox Talks; and

- The 'Am I Ready' self-assessment.

Genesis provided the CER auditors with NOVA's Operational RC Risk Assessment process and its Operational Risk Assessment Tool. This process and tool are to be:

- Used when a new or significant change is identified during planning, organizational change, or facility change;
- Appropriate to the scope being assessed; and
- Used to consider a lifecycle perspective.

The RC Governance and Systems Leader is responsible for overseeing the risk assessment process. The process is to include an annual review, at minimum, of the identified risks to verify that all information is current, hazards and risks are identified, and that operational planning and controls are appropriate and in place. Genesis verified through document and record review and during interviews that this is being carried out.

At the facility level, which includes Genesis, hazards and risks are identified during the job planning stage, using the following procedures and tools:

- The RC Risk Memory Jogger;
- The Operational RC Risk Registers;
- Job Safety Analysis;
- Job Task Analysis;
- Field Level Risk Assessment;
- Field Level Risk Hazard; and
- Workplace Hazard Assessment Tool – In Field.

During the job execution stage, hazards and risks are identified through:

- Safety Interactions;
- Toolbox Talks;
- Am I Ready Analysis; and
- Operational Risk Management Action Plan.

During an emergency at NOVA ME, emerging hazards are identified by the Emergency Response Team in conjunction with first responders. Primary procedures and tools used during emergencies include:

- The Strategies, Tactics, Assignments, Resources, and Safety Plan Worksheet;
- Field Level Risk Assessment;
- Workplace Hazard Assessment Tool – In Field; and
- Toolbox Talks.

Safety interactions are a peer-to-peer interaction process in which NOVA staff are encouraged to discuss safety issues and hazards as they arise.

Pipeline integrity management hazard assessments, which are completed on the Genesis system, include:

- Process Hazard Risk Assessments completed every five years on the ME pipeline facilities;
- Pipeline risk assessments are to be completed roughly every five years, focusing on third-party interference, corrosion, design and incorrect operation failure risks and associated consequences;
- Any project work or change on the pipeline;
- Occupational safety risk assessments conducted during any work or inspections; and

- Other hazard identification procedures such as right-of-way inspections to ensure the integrity of the right-of-way.

Genesis has implemented its process to identify hazards. Genesis provided the CER auditors with documents and records which indicate it is using these hazard assessment tools and procedures. Genesis uses a Safe Work Permitting (**SWP**) process to manage all work conducted at its facilities and pipelines. This permit process is used by the supervisor issuing the permit to detail the hazards and risks associated with any job and the controls that are in place. The SWP is also used to ensure employees and contractors are aware of work or procedures that are going on that might impact them.

NOVA, ME, and Genesis use a software system to form the corporate RC risk register. This software system addresses Environmental, Health, and Safety, risk, and compliance management. Aside from job related hazards and risks, the software is also used to log safety interactions, complaints, and incidents.

NOVA and Genesis staff demonstrated the software system to the CER auditors. The demonstration included the information stored within software, the functionality of its dashboard, and the way data can be searched, and trends monitored.

AP-02: Hazard Inventory

Finding status	Non-compliant
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 list of documents and records that were reviewed related to this assessment include:</p> <ul style="list-style-type: none"> • NOVA RC 14001 Management System • RC Risk Program • Manufacturing East Pipeline Management System • Access to the Enablon Risk Register System <p>The following interview is related to this finding:</p> <ul style="list-style-type: none"> • Interview 2.1 - AP-02 - 6.5(1)(d) Inventory of the identified hazards and potential hazards
Finding summary	Genesis demonstrated that it has established and is maintaining an inventory of hazards and potential hazards related to its CER-regulated pipelines that addresses all section 55 program areas. The company also provided evidence that the inventory is reviewed annually. However, Genesis' hazards and potential hazards are not yet integrated into the NOVA corporate risk program. As a result, more than one hazard inventory list exists and it's unclear how they relate.

Detailed Assessment

Genesis has not satisfied the expected outcomes above.

As discussed in the assessment for AP-01, ME, and Genesis and its CER-regulated pipelines come under the umbrella of NOVA's MS. NOVA requires its corporate and facility leaders to follow and abide by its corporate programs and processes. NOVA uses its Enablon system to keep track of hazards and requires its facilities to also use the system. NOVA and Genesis provided the CER auditors with an opportunity to view the Enablon system, gain an insight into the information stored there and how it is being used to monitor for trends.

At the time of the audit, it was noted to the CER auditors that all the hazards associated with Genesis' CER-regulated pipelines had not yet been entered into the Enablon system. NOVA's RC 14001 management system is still under transition to the new RC 14001 standard, which is planned to be fully transitioned by the fall of 2025. According to NOVA, it plans to develop the system to the point where it could be officially certified to the RC 14001 Technical Standard.

As part of this ongoing transition, the CER auditors were advised that the intention was to have all hazards and risks associated with all of NOVA's facilities incorporated into the corporate risk program by the fall of 2025. This would include those of ME, and Genesis' CER-regulated pipelines. Until then, all the hazards associated with Genesis' CER-regulated pipelines are contained within the ME Pipeline Management System manual but not within the NOVA corporate risk program.

The CER auditors reviewed the hazard inventory in the ME Pipeline Management System document and noted that it includes hazards and potential hazards related to:

- Occupational Health and Safety;
- Public Safety;
- Environmental Protection;
- Damage Prevention;
- Pipeline Integrity;
- Emergency Response;
- Security; and
- Cybersecurity.

The CER auditors found that the inventory of hazards in the ME Pipeline Management System document addressed all the section 55 program areas required by the OPR.

The RC Governance and Systems Leader is responsible for overseeing the risk assessment process, which includes hazard identification. The process includes an annual review at minimum of the identified risks to verify that all information is current, hazards and risks are identified, and that operational planning and controls are appropriate and in place. Ad hoc reviews also take place as new hazards are identified through the management of change process or other activities.

Genesis demonstrated that it has created and is keeping up with a list of hazards and potential hazards associated with its CER-regulated pipelines, including all section 55 program areas. Additionally, the company provided proof that the inventory is updated annually.

Nevertheless, the NOVA corporate risk program does not yet incorporate Genesis' hazards or potential hazards. As a result, more than one hazard inventory list exists and it's unclear how they relate. When required, the inventory can be divided into smaller pieces to support the management system's operations, but the company must be able to generate a single inventory upon request. NOVA is planning to complete the integration of all facility hazards into its corporate risk program and has recognized that this is an issue of concern as it is not meeting its own corporate requirements. Having a single repository of hazards allows corporate management to identify where its greatest hazards exist so it can take that into account during business planning and budget allocation.

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 list of documents and records that were reviewed related to this assessment include:</p> <ul style="list-style-type: none"> • NOVA RC 14001 Management System • RC Risk Program • Emergency Services Program • Operational RC Risk Assessment Process • Operational Risk Assessment Tool <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • Interview 1.3 - AP-03 - 6.5(1)(e) - Risk assessment
Finding summary	NOVA's MS directs its facilities and pipeline operators to use the corporate programs and processes for risk assessment that were deemed compliant. Genesis demonstrated to the CER auditors that it uses this process for assessing risks. The consequence evaluation of these risks is then used to develop emergency response plans for the EM Program.

Detailed Assessment

Genesis has satisfied the expected outcomes above.

As explained in the assessment for AP-01, ME and Genesis come under the corporate umbrella of NOVA's RC 14001 MS. The NOVA MS directs its facilities to use the corporate risk program and associated processes to assess risks and opportunities. Genesis provided the CER auditors with NOVA's RC Risk Program document, its compliant Operational RC Risk Assessment Process, and its Operational Risk Assessment Tool. These programs, processes, and tools are to be reviewed and applied by each facility. They are to be:

- Used when a new or significant change is identified during planning, organizational change, or facility change;
- Appropriate to the scope being assessed; and
- Used to consider a lifecycle perspective.

According to the RC Risk Program document, risk management is fundamental to how NOVA's business is managed at all levels and is a key responsibility of governance and leadership. The program document includes roles and responsibilities for those involved. The document also states that facilities are within its scope, which includes ME, and Genesis with its CER-regulated pipelines.

The Risk Assessment process that allows for evaluation of all hazards and potential hazards (including normal and abnormal conditions) is the method by which NOVA and Genesis identify their hazards and risks and it comprises of:

- Hazard identification;
- Risk Analysis;
- Evaluation against established criteria;
- Risk Treatment; and
- Review and Improve.

For risk analysis, NOVA and Genesis evaluate the potential frequency of an event and its potential consequences to arrive at a risk ranking. Approaches available for frequency analyses include:

- Analysis of historical operational and incident data;
- Fault and event tree analysis;
- Mathematical modelling; and
- Judgement of experienced and qualified engineering and operating personnel based on known conditions.

The company has determined risk tolerance criteria. The risk analysis process leads to one of four possible risk ratings: 'AA' (Highly Unacceptable Risk), 'A' (Unacceptable Risk), 'B' (Unclear as to Risk Acceptability), or 'C' (Acceptable Risk). The recommended action for each risk ranking is shown in the RC Risk Matrix. For example, for an 'AA' risk ranking, immediate follow up action is required (e.g., shutdown). For new projects, the risk must be addressed before the project can proceed.

The RC Governance and Systems Leader is responsible for overseeing the risk assessment process. The process includes an annual review at minimum of the identified risks to verify that all information is current, hazards and risks are identified, and that operational planning and controls are appropriate and in place.

Genesis demonstrated to the CER auditors through document and record review, and during interviews that it identifies hazards and threats associated with its CER-regulated pipelines in the areas of:

- Occupational Health and Safety;
- Public Safety;
- Environmental Protection;
- Damage Prevention;
- Pipeline Integrity;
- Emergency Response;
- Security; and
- Cybersecurity.

Genesis then assesses the risks associated with all hazards and potential hazards in accordance with the requirements of the corporate risk assessment program and associated procedures. Once this is done, it develops appropriate controls based on a standard hierarchy of control types, including the development of ERPs for the EM Program. The risks are then monitored and re-evaluated for changing circumstances. Genesis was able to demonstrate that it is following the corporate processes.

During the response to a pipeline emergency that may impact public safety, risk assessment is conducted in coordination with first responders. For Genesis, this agency is usually the St. Clair Township Fire Department.

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 subsections 6.5(1)(a to x) of the OPR.
Relevant information provided by the company	<p>The list of documents and records that were reviewed related to this assessment include:</p> <ul style="list-style-type: none"> • NOVA RC 14001 Management System • Learning Management System • Core Emergency Role Training Matrix • Manufacturing East Emergency Response System (MEERS) Manual • Pipeline Emergency Response Team (PERT) • PERT Distribution Matrix • PERT 2022 Emergency Exercise Record • Contractor Safety Management Program • Management of Outsourced Services Process • ME RC14001 Conformance Table <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • Interview 2.2 - AP-04 - 6.5(1)(l) Making employees and others aware of their responsibilities (Process Owner) • Interview 2.3 - AP-04 - 6.5(1)(l) Making employees and others aware of their responsibilities (Field personnel)
Finding summary	Genesis demonstrated that it follows NOVA corporate guidance and uses corporate processes to ensure that employees and others who work on behalf of the company are made aware of their roles and responsibilities, including those during an emergency.

Detailed Assessment

Genesis has satisfied the expected outcomes above.

NOVA's MS provides overarching guidance to corporate and facility leaders over their roles and responsibilities for the proper management of the RC MS. The NOVA MS directs corporate and facility leaders to ensure that the management system is established, implemented, and maintained.

Genesis provided the CER auditors with its conformance table. The conformance table is used to convey roles and responsibilities to corporate and facility leaders and lists the supporting corporate programs and processes that are in place to achieve the MS requirements. The conformance table can be used by facility leaders to show how they are meeting all of the corporate requirements for communicating roles and responsibilities, including those for the EM Program.

For the communication of roles, responsibilities, and authorities, the conformance table states that at corporate, facility, and functional level, senior management shall ensure the responsibilities and authorities for relevant roles are assigned and communicated. This is to include the implementation of the MS and reporting on performance to management. It states that employee roles, responsibilities, and accountabilities for meeting the requirements of the RC 14001 MS are to be documented and communicated via training, standard operating procedures, personal objectives, and other means. At the facility level, in accordance with corporate requirements, Genesis demonstrated that it uses employee role profiles to communicate roles and responsibilities.

According to the NOVA MS, the corporate requirement is for corporate and facility leaders to ensure the responsibilities and authorities for relevant roles are assigned and communicated. Within the MS document, there is a table which is used to assign overall responsibility for each element of the MS to specific positions within the corporate hierarchy. The MS document also contains a detailed corporate RACI Matrix showing who is Responsible, who is Accountable, who is to be Consulted, and who is to be Informed for each aspect of the management system.

According to the NOVA MS, roles, and responsibilities for new hires are to be communicated through job-specific classroom and computer-based training. Genesis demonstrated that it has an employee training matrix that is used to detail the training that each employee is required to take.

The communication of responsibility to complete training is accomplished through NOVA's Learning Management System (**LMS**). According to the NOVA MS, training profiles are to be used to outline mandatory training according to roles and job duties. The LMS is used to keep track of training and qualifications. Through the LMS, employees are alerted to upcoming training. If training is missed or overdue, the supervisor and the employee are both alerted.

Genesis also provided the CER auditors with its Core Emergency Role Training Matrix which details:

- All the training courses that are available for emergency response;
- Which positions are to take the training;
- The method of delivery; and
- The frequency of training.

As an example, people who have roles in the Emergency Operating Centre (**EOC**) are required to take EOC management group training; and people with roles in the Incident Command System (**ICS**) are required to take ICS training.

The NOVA MS dictates that facilities can have either a single emergency response plan or multiple coordinated plans. For ME, emergency response plans are found in the MEERS. Pipeline-specific emergency response plans are listed in the Pipeline Emergency Response Team (**PERT**) manual. Both the MEERS and the PERT provide detailed roles and responsibilities for Genesis personnel during emergencies.

The PERT distribution matrix shows who is supposed to receive a copy of the PERT manual to make sure people with emergency response roles are kept current with their roles and responsibilities. Genesis provided evidence that the manual had been properly distributed to those on the list including NOVA's employees with ERP roles, local officials, police, and fire departments.

Genesis provided a copy of a letter which had been distributed to the St. Clair Fire Chief asking that an update to the PERT manual be reviewed to ensure there was coordination in emergency planning and response.

Another method that Genesis uses to ensure that its employees and those who provide support are aware of their roles and responsibilities is through the PERT's Emergency Response Drill Program. These exercises can consist of tabletop exercises where the steps to respond to a simulated emergency are discussed or field drills in which staff, local first responders, and apparatus are deployed. Genesis provided the CER auditors with a record of a full-scale PERT 2022 Emergency Exercise including the participants list. After these exercises and drills, Genesis demonstrated that it holds sessions to discuss lessons learned and, where necessary, distributes them to a wider audience.

As for communicating roles and responsibilities to contractors, the NOVA MS directs corporate leaders and facility managers to its Contractor Safety Management Program, which references the Management of Outsourced Services process. Contract documents are used to convey to contractors the actions they are to take in the event of an abnormal event. Genesis stated that it does not use contracted personnel to provide support during an emergency. However, it does employ contractors for regular maintenance activities.

As per the requirements of the Contractor Safety Management Program, for every contract, a designated service representative (**DSR**) is appointed to ensure contractors are briefed on safety and emergency procedures and to ensure that contractors are properly supervised and managed while they are on site. The DSR is required to prepare a Contractor Safety Plan which is used to provide a detailed scope of work, identify the hazards and risks associated with the work, provide detailed hazard assessments, risk mitigation plans, qualifications required for the job, and other details designed to ensure that contracted services are made aware of the hazards and risks. The DSR is required to conduct a pre-job kick-off meeting with contractors during which roles and responsibilities are explained.

The NOVA MS communicates roles and responsibilities to third parties who might conduct work near Genesis' pipelines. NOVA has a web page on its external internet site that provides information to anyone conducting work near its pipelines during design and construction. There is also a public awareness brochure that is posted online.

The internal communication process is also used to inform internal stakeholders about their roles and responsibilities concerning the proper implementation of the NOVA MS.

AP-05: Internal and External Communications

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"> • 2021 Pipeline Valve Maintenance Notice • 2023 Pipeline Magnet • 2023_2024 Winter slip prevention • Blackburn News Article re emergency exercise • Community Awareness and Emergency Response (CAER) Manual • CO 103 RC14001 Management System Manual • Cover letter for mailings • Employee virtual town hall April 11 2023 • Genesis Pipeline Canada Ltd Pipeline Emergency Response Team (PERT) Manual • Manufacturing East Town Hall December 2023 • ME Open House invitation • ME Pipeline brochure 2023 • MEERS manual changes tracker • MEERS section 5.0 Notifications and Reporting • Near neighbour dinner information session invitation • NOVA Chemicals ME Environmental Emergency (E2) Fact Sheet • NOVA Chemicals Pipeline Operations Preparation for an Emergency Response • NOVA Now newsletter example • Orange heat stress alert - NOVA Chemicals

	<ul style="list-style-type: none"> • Sarnia-Lambton Alerts example <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • Interview 3.1 - AP-05 - 6.5(1)(m) - Internal and external communication of information (Process Owner) • Interview 3.2 - AP-05 - 6.5(1)(m) - Internal and external communication of information (Field personnel)
Finding summary	<p>Genesis demonstrated that it has implemented the internal and external communications processes established by NOVA for the dissemination of information related to safety, security, and protection of the environment. It also demonstrated that it has integrated NOVA's required communication strategies into the Emergency Services Program for the development of ERPs and communicating them to those who need to know. The successful execution of these processes was demonstrated by the numerous internal and external communication examples provided.</p>

Detailed Assessment

Genesis has satisfied the expected outcomes above.

A process has been established, and the communication methods have been defined. Genesis has several layers of documents that, together, discuss how communications occur.

NOVA's MS describes the compliant communication process within and external to NOVA which is crucial to the effectiveness of its operations and assists NOVA with:

- Understanding stakeholder perspectives;
- Maintaining a high-level awareness of the management system;
- Engaging employees in the implementation and maintenance of the management system;
- Strategically engaging external stakeholders to manage reputation and risk; and
- Publicly reporting on RC programs and performance.

NOVA's MS requires facilities such as Genesis to use the corporate process for internal and external communications. The corporate communication process describes methods of communication including informing the facility leaders what to communicate, how to communicate, and when. The communications plans also provide comprehensive recommendations for management system communications, including information on the target audience, communication type, delivery mode, delivery date, content, and delivery ownership. Genesis provided the CER auditors with documents and records to show that it is following the process.

Quarterly, NOVA holds a communication strategy meeting in which they review corporate priorities, review previous targets, and discuss new targets for internal and external communications.

The development and dissemination of ERPs is carried out in accordance with the requirements of the Emergency Services Program. The ERPs are contained within the MEERS and the PERT, which follows the corporate allowance for facilities to have either a single ERP or multiple coordinated plans. As discussed previously, the PERT is carefully distributed to those who have roles and responsibilities within the emergency response plans and those who have a need to know.

Both MEERS and PERT Manuals outline the process for internal and external notifications of an emergency situation that follow and comply with the corporate processes. Emergency contact lists are included in both Manuals.

Genesis provided samples of both internal and external communications such as internal emails, internal meeting minutes, and external newsletters. Thus, internal and external communications are occurring and both processes have been approved and used as intended for a minimum of three months.

Examples of communications that were carried out by Genesis, proving that the process is being implemented, included:

External

- Manufacturing East Open House invitation;
- Near Neighbour dinner and information session invitation;
- Samples of Sarnia-Lambton Alerts from NOVA Chemicals (including most recent alerts from 2024 as well as alerts reaching back to 2021 showing its historical usage);
- NOVA Chemicals Manufacturing East Environmental Emergency Fact Sheet;
- Communication to the public regarding drills and emergencies as well as flaring awareness to industry partners and local first responders; and
- A communication bulletin distributed to the Sarnia area regarding a maintenance turnaround.

Internal:

- Manufacturing East RC Communications – example of Winter Slip Prevention dated November 2023;
- Town Hall meetings (example Manufacturing East Town Hall from December 2023 and Employee virtual town hall April 2023); and
- Agenda for a quarterly communication strategy meeting.

During the response to an emergency, the assigned Public Information Officer in the EOC will work with the Incident Commander and EOC Management Group to prepare and disseminate information internally and externally. In addition to traditional external communications, NOVA leverages its membership in the local CAER group, Bluewater Association for Safety, Environment and Sustainability, to send public notifications through the Sarnia-Lambton Alerts system.

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"> • Genesis Pipeline Canada Ltd Pipeline Emergency Response Team (PERT) Manual • 2024 PERT Approval • 2024 PERT review meeting minutes • CO 103 RC14001 Management System Manual • MEERS Appendix C Emergency Response Guidelines and Flowcharts • NOVA Chemicals Records Management Policy • PERT Manual document control process <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • Interview 4.1 - AP-06 - 6.5(1)(o) - Preparing, reviewing, revising, and controlling documents (Process Owner) • Interview 4.2 - AP-06 - 6.5(1)(o) - Preparing, reviewing, revising, and controlling documents (Document owner)
Finding summary	NOVA's MS directs its corporate offices and facility operations to use the corporate programs and processes for document control. Genesis provided evidence that it follows that document control process while providing specific guidance within facility specific documentation, including the documentation applicable to the EM Program, on how often they are to be reviewed and by whom.

Detailed Assessment

Genesis has satisfied the expected outcomes listed above.

As stated in the NOVA MS, NOVA is committed to maintaining documented information so that RC requirements and processes are understood and executed as planned by employees, contractors, and other interested parties. The NOVA MS further describes in detail the RC documented information including general requirements for creating and updating RC documents as well as control of the documented information.

The control of RC documents is to be carried out in accordance with the RC Documented Information procedure that applies to the RC management system programs including the Emergency Services Program.

ERPs for the EM Program are to be developed based on the results of consequence assessments completed under the RC Risk Program. According to the Emergency Services Program document, facilities can have a single emergency response plan or multiple coordinated plans. The Emergency Services Program document lists all the information and considerations that must go into the development of an ERP for the EM Program.

The NOVA Records Management Policy, that applies to all its subsidiaries including Genesis sets forth the record keeping policy and its company commitment to effectively manage the lifecycle of all records in compliance with the applicable legal and business requirements.

At the facility level, the ME RC Document Control process is to provide a method of issuing and updating all regional RC manuals. This process is applied to all of the program areas. The PERT Manual Document Control process is to provide a method of reviewing and revising the ME PERT manual.

All of the reviewed documentation for this audit included revision control tables. Each document specified the review frequency and responsible parties. Documents like the hazard inventory are reviewed annually, while others follow a three-year or five-year review cycle. All documents provided were found to be up to date.

When it comes to EM Program specific documentation, the PERT manual is reviewed annually, and an example of its review was provided during the audit in the form of a review meeting minutes dated March 2024.

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"> • Bulletin 02-22 - Emergency Services Program 700 • Canadian Integrity Management Program • CP 101 RC Documented Information • ES-DCS-0403 Alarm Management • ONE-08030 Emergency Shutdown of PL 16A • ONO-06212 Ethane Normal Shutdown • ONT-09090 Leak Detection alternatives during scheduled MF DCS outage • OPLO-06012 Leak Alarm, ATMOS failure or power failure to trip valve contingency procedure • P-195.402(d)(1)(iii) Loss of Communications • Pipeline Management System • PL 20A AOA Example • PRGM 700 Emergency Services • PSLM Alarm Management Procedure • Review of Corunna Site Procedures • Security Management Plan Section 400 Plans - screenshot • Spill Prevention and Contingency Plan <p>The following interviews are related to this finding:</p> <ul style="list-style-type: none"> • Interview 5.1 - AP-07 - 6.5(1)(t) - Developing contingency plans for abnormal events

**Finding
summary**

Genesis demonstrated that it has implemented the process established by NOVA under Emergency Services Program for developing contingency plans for abnormal events. Genesis also demonstrated that this process is linked to the corporate risk assessment process. Numerous output examples of plans were provided to serve as evidence that the process has been implemented as designed for the EM Program.

Detailed Assessment

Genesis has satisfied the expected outcomes above.

The Emergency Services program document is the process the company uses for creating contingency plans to address abnormal events. It includes a section on Emergency Preparedness and Response, which details various plans based on risk assessments using the RC Risk process. These plans are designed to meet NOVA's MS requirements, regulatory standards, and compliance obligations.

The program identifies potential emergency scenarios using procedures from the RC Risk process and the RC Management of Process Risk standard. These scenarios include events like utility failures, transportation accidents, evacuations, labor disruptions, civil unrest, vandalism, and robberies.

The program ensures that specific emergency response procedures are developed when the consequences of identified hazards go beyond normal operations. These procedures are tailored to provide the best responses to these hazards.

The Emergency Services program also requires each facility to appoint a coordinator responsible for developing and overseeing effective emergency management strategies. The program specifies the minimum information that must be included in an emergency response plan, such as the purpose, scope, roles and responsibilities, contact information, and procedures.

For CER-regulated pipelines, Genesis provided the CER auditors with the PERT manual, part of NOVA's larger Emergency Management Program, to address pipeline emergencies.

The company has implemented the process for developing contingency plans. Genesis demonstrated its planning process for handling abnormal operating conditions, such as communication loss, pipeline control issues, leak detection, and leak response. They also developed a spill response contingency plan in line with Ontario Regulation 224/07.

In emergencies like gas or liquid releases, Incident Command will prepare an Incident Action Plan, using available guidelines, first responders' input, and situation-specific considerations.

Examples of developed contingency plans include the Regional Spill Prevention and Contingency Plan, loss of communications, leak alarm, leak detection system failure, alarm management procedure, and emergency pipeline shutdown.

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
AP	Audit Protocol
BASES	Bluewater Association for Safety, Environment and Sustainability
CAER	Community Awareness and Emergency Response
CAPA	Corrective and Preventive Action
CER	Canada Energy Regulator
CER Act	<i>Canadian Energy Regulator Act</i> (S.C. 2019, c. 28, s. 10)
CP	Corporate Process
DSR	Designated Site Representative
EM	Emergency Management
EOC	Emergency Operating Centre
ERP	Emergency Response Plan
Genesis	Genesis Pipeline Canada Limited
ICS	Incident Command System
ISO	International Organization for Standardization
JHA	Job Hazard Analysis
LMS	Learning Management System
ME	Manufacturing East
MEERS	Manufacturing East Emergency Response System
MS	Management System
NOVA	NOVA Chemicals Corporation
OPR	<i>Canadian Energy Regulator Onshore Pipeline Regulations</i> (SOR/99-294)

PERT	Pipeline Emergency Response Team
PRGM	Program
RACI	Responsible, Accountable, Consulted, Informed
RC	Responsible Care
SWP	Safe Work Permit
The company	Genesis Pipeline Canada Limited