

File OF-Surv-OpAud-M253-2018-2019
19 February 2019

Mr. Thomas A. Hardison
President
Montreal Pipe Line Limited
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Montréal-Est, QC H1B 1B3
Email : [REDACTED]

Dear Mr. Hardison:

**National Energy Board (Board or NEB) Final Audit Report
Montreal Pipe Line Limited (MPLL) – CV1819-418**

The Board has completed its Final Audit Report of MPLL. MPLL was provided with the Draft Audit Report on 11 January 2019, and MPLL responded on 4 February 2019 that it had no comments to provide on the Draft Audit Report. Since the Board had no comments to consider, no changes were made to the Draft Audit Report and its Appendices.

The findings of the audit are based upon an assessment of whether MPLL was compliant with the regulatory requirements contained within:

- the *National Energy Board Act* and its associated regulations, including;
- the *National Energy Board Onshore Pipeline Regulations*;
- any conditions contained within applicable Board certificates or Orders issued by the Board.

MPLL was required to demonstrate the adequacy and effectiveness of the methods it has selected and employed within its management system and integrity program to meet the regulatory requirements listed above. Throughout this audit, the Board has evaluated selected management system processes and requirements as applied to MPLL's integrity program. The Board has enclosed its Final Audit Report and associated Appendices with this letter. The Board will make the Final Audit Report public and it will be posted on the Board's website.

Within 30 days of the issuance of the Final Audit Report by the Board, MPLL is required to file a Corrective and Preventative Action Plan (CAPA Plan), which describes the methods and

timing for addressing the Non-Compliant findings identified through this audit, for approval. Board staff will provide the CAPA Plan template for MPLL to complete.

The Board will also make the CAPA Plan public and will continue to monitor and assess all of MPLL's corrective actions with respect to this audit until they are fully implemented. The Board will also continue to monitor the implementation and effectiveness of MPLL's management system and programs through targeted compliance verification activities as a part of its regulatory mandate.

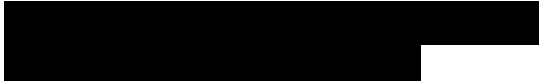
If you require any further information or clarification, please contact Niall Berry, Lead Auditor, at 403-471-1921.

Yours truly,

Sheri Young
Secretary of the Board

Attachment

c.c.



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Board



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Final Audit Report
Integrity Management Program

Compliance Verification Activity: CV1819-418
File OF-Surv-OpAud-M253-2018-2019-01

19 February 2019



Executive Summary

In accordance with Section 49(3) of the *National Energy Board Act*, the National Energy Board (NEB or the Board) conducted a compliance audit of Montreal Pipe Line Limited (MPLL) during the period from 25 May to 4 October 2018.

The Board expects companies to have effective, fully developed and implemented management systems and protection programs and a strong culture of safety, all of which are fundamental to keep people safe and protect the environment. The NEB *Onshore Pipeline Regulations* (OPR) require that companies develop, implement and maintain an Integrity Management Program (IMP) that anticipates, prevents, manages and mitigates conditions that could adversely affect safety or the environment during the design, construction, operation, maintenance or abandonment of a pipeline. The objective of this audit was to verify that the company has established and implemented an IMP in accordance with the OPR.

During the audit, the NEB assessed compliance to selected management system processes and requirements as applied to MPLL's IMP. The scope also included a review of selected company activities and operational practices related to the IMP. The audit was conducted using the regulatory requirements listed in Appendix I of this report.

The audit identified non-compliances in 10 out of the 12 protocol items assessed. The majority of the non-compliant findings are due to processes that were not explicit or properly documented. The audit verified that MPLL was conducting the activities required by the OPR and that MPLL had documents describing those activities. However, some of those documents did not meet all the OPR requirements for the management system processes. Appendix I of this report provides the details regarding all of the Board's findings.

Despite the deficiencies found, MPLL demonstrated that it has implemented controls, inspection and monitoring activities to manage the integrity of the facilities in scope for this audit in order to ensure the protection of the environment and safety of people.

The Board expects MPLL to address the deficiencies in the management system processes which were identified in this audit. While no immediate enforcement actions are required to address the Non-Compliant findings, the Board requires MPLL to develop and submit a Corrective and Preventive Action Plan (CAPA Plan) to address the Board's findings. MPLL is required to submit its CAPA Plan for approval within 30 days of this Final Audit Report being issued by the Board.

The Board will assess the implementation of all of MPLL's corrective and preventive actions to confirm they are completed in a timely manner. The Board will also continue to monitor the overall implementation and effectiveness of MPLL's management system through targeted compliance verification activities as a part of its ongoing regulatory mandate.

The Board will make its Final Audit Report and MPLL's approved CAPA Plan public on the Board's website.



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1.0 Introduction

In accordance with Section 49(3) of the *National Energy Board Act*, the National Energy Board conducted a compliance audit of MPLL's Integrity Management Program during the period from 25 May to 4 October 2018.

1.1 Audit Objective

The objective of this audit was to verify that the company has established and implemented an IMP in accordance with the OPR. The audit assessed the adequacy, implementation and effectiveness of:

- selected management system processes and requirements as applied to the IMP; and
- selected company activities and operational practices related to the IMP.

1.2 Audit Scope

The audit scope included the requirements of the OPR primarily focusing on, but not limited to, the management system requirements of OPR sections 6.5(1)(a) through (f), (q), (r), (t) and (u) as well as section 6.6. Other requirements of the OPR related to the integrity program were also included such as sections 27, 37, 39, 40, 42, 53 and 55, as well as relevant clauses of CSA Z662-15.

The audit scope was limited to the operations part of the life cycle of the pipeline system. In terms of facilities, pipe and equipment, the audit scope was limited to the pipelines and the associated stations' piping. Storage tanks, pressure vessels, and ancillary equipment and piping were not included in the scope.

2.0 Company Overview

MPLL operates a pipeline system that transports crude oil from Portland, Maine, U.S.A. to Montreal, Quebec, Canada. The operating pipeline was constructed in 1965 and has a diameter of 24 inches. MPLL also has an 18 inch line that parallels the 24 inch pipeline, but this line is currently deactivated. The MPLL system is connected to refineries in Montreal and to Enbridge Pipeline Inc.'s Line 9, which delivers to MPLL facilities in Montreal. The NEB regulates the portion of MPLL system that starts at the U.S.A. / Canada border and ends in Montreal. Figure 1 below shows a map of MPLL's system.



Figure 1: Map of MPLL Pipeline System



Map produced by the NEB, May 2018. The map is a graphical representation intended for general informational purposes only.



3.0 Assessment of Compliance of the Audited Processes and Activities

This section of the audit report documents the Board's assessment of compliance of MPLL's management system processes and activities reviewed as part of the audit. To determine compliance, the Board reviewed MPLL's documents and records and conducted interviews with company.

There are two possible audit findings which can be assigned to each audit protocol item evaluated by the Board in this audit:

- No issues noted – *no non-compliances were identified during the audit based on the information provided and reviewed within the context of the scope of the audit;*
- Non-compliant - *an evaluated regulatory requirement does not meet legal requirements. The company has not demonstrated that it has developed and implemented programs, processes and procedures that meet the legal requirements. A corrective action plan must be developed and implemented.*

The Board expects companies to have effective, fully developed and implemented management systems and protection programs and a strong culture of safety, all of which are fundamental to keep people safe and protect the environment. The OPR s. 40 requires that companies develop, implement and maintain an IMP that anticipates, prevents, manages and mitigates conditions that could adversely affect safety or the environment during the design, construction, operation, maintenance or abandonment of a pipeline.

The OPR s. 6.1 outlines the Board's management system requirements, which are as follows:

OPR s. 6.1: A company shall establish, implement and maintain a management system that

- (a) is systematic, explicit, comprehensive and proactive;*
- (b) integrates the company's operational activities and technical systems with its management of human and financial resources to enable the company to meet its obligations under section 6;*
- (c) applies to all the company's activities involving the design, construction, operation or abandonment of a pipeline and to the programs referred to in section 55;*
- (d) ensures coordination between the programs referred to in section 55; and*
- (e) corresponds to the size of the company, to the scope, nature and complexity of its activities and to the hazards and risks associated with those activities.*

In determining MPLL's compliance with respect to establishing and implementing an IMP, the Board evaluated documents and records that described the company's establishment and



implementation of selected management system processes in the context of their application to the company IMP. This aided the Board in evaluating MPLL's systematic practices as applied to the IMP. The Board's findings, therefore, are not an evaluation of MPLL's entire management system or IMP.

The audit verified that MPLL was conducting the activities required by the OPR and that MPLL had documents describing those activities. However, these documents did not meet all the OPR requirements for the management system processes. In some cases, the documents did not have explicit links to other processes or supporting procedures. For example, in the protocol item AP-03, the process for identifying and analyzing hazards had no explicit link or reference to the internal reporting process, which can be a key input to the process for identifying and analyzing hazards. Some process documents provided were also not properly describing the roles and responsibilities of those involved in the process or did not document all necessary steps of the process.

Another issue identified for some of the processes was the lack of integration between the documents provided for the management system and those provided for the IMP. The OPR requires the processes to be part of both the management system and the programs, and MPLL's management system and IMP documents provided were independent of each other, with no explicit link between them, or without any direction from the management system documents for the IMP to apply the processes at the program level. This issue was identified in protocol items AP-03, AP-05 and AP-06.

The detailed assessment of the management system processes and other requirements is documented in Appendix I, attached to this report. Table 1 below provides a summary of the findings and deficiencies identified during the audit.

Appendix II of this report provides a list of all the abbreviations contained in this report. Appendix III provides the list of documents reviewed and Appendix IV provides the list of company representatives interviewed during the audit.

**Table 1: Findings Summary**

Audit Protocol Number	OPR Clause	Summary of the Requirement	Finding	Summary of Deficiencies to be addressed
AP-01	s. 6.5(1)(a)	Process for setting objectives and targets	Non-compliant	MPLL did not have an explicit process documenting all the necessary steps of the process for setting its objectives and targets. Roles and responsibilities for this process were also not fully documented.
AP-02	s. 6.5(1)(b)	Performance measures	Non-compliant	MPLL did not demonstrate that its performance measures could be used to assess its success in achieving its goals, objectives and targets.
AP-03	s. 6.5(1)(c)	Process for identifying and analyzing hazards	Non-compliant	MPLL did not have an explicit process documenting all the necessary steps of the process for identifying and analyzing hazards. Also, MPLL did not have a process that is part of both the management system and the integrity program. In addition, one of the documents provided was not up-to-date.
AP-04	s. 6.5(1)(d)	Inventory of hazards	No issues noted	Based on the scope of this audit, the interviews conducted and the documentation reviewed, no non-compliances were noted.
AP-05	s. 6.5(1)(e)	Process for evaluating and managing risks	Non-compliant	MPLL did not have an explicit process documenting all the necessary steps of the process for evaluating and managing the risks. Also, MPLL did not have a process that is part of both the management system and the integrity program. In addition, one of the documents provided was not up-to-date.
AP-06	s. 6.5(1)(f)	Process for developing and implementing controls	Non-compliant	MPLL did not have an explicit process documenting all the necessary steps of the process for developing and implementing controls. Also, MPLL did not have a process that is part of both the



				management system and the integrity program. In addition, MPLL was not referring to the appropriate standard for its repair criteria in one of its documents.
AP-07	s. 6.5(1)(q)	Process for coordinating and controlling operational activities	Non-compliant	MPLL did not have an explicit process documenting all the necessary steps of the process for coordinating and controlling operational activities.
AP-08	s. 6.5(1)(r)	Process for internal reporting of hazards, incidents and near-misses	No issues noted	Based on the scope of this audit, the interviews conducted and the documentation reviewed, no non-compliances were noted.
AP-09	s. 6.5(1)(t)	Process for developing contingency plans	Non-compliant	MPLL did not have a documented process for developing contingency plans.
AP-10	s. 6.5(1)(u)	Process for inspecting and monitoring	Non-compliant	MPLL did not have an explicit process documenting all the necessary steps of the process for inspecting and monitoring the company's facilities and activities. Also, MPLL did not have a process that is part of both the management system and the integrity program.
AP-11	s. 6.6(1)	Annual Report	Non-compliant	The annual report did not describe the performance of MPLL in achieving its goals, objectives and targets, as measured by its performance measures, for the integrity program.
AP-12	s. 55(1)	Program audits	Non-compliant	MPLL's internal audits did not include a verification of compliance with the OPR.



4.0 Conclusion

The audit identified non-compliances in 10 out of the 12 protocol items assessed. The Board notes that the majority of the non-compliant findings are due to management system processes that were either not explicit, properly documented, or not part of both the management system and integrity program.

Although deficiencies were identified, MPLL has demonstrated that it has established and implemented an Integrity Management Program with controls, inspection and monitoring activities to manage the integrity of its facilities in order to ensure the protection of the environment and safety of people.

While no enforcement actions are immediately required to address these non-compliant findings, the Board requires MPLL to develop and submit a CAPA Plan to address the Board's findings. The Board will provide MPLL with a CAPA Plan template that MPLL will be required to use to develop its CAPA Plan. The CAPA Plan must describe its proposed methods to resolve the deficiencies identified and the timeline in which corrective and preventive actions will be completed. MPLL is required to submit its CAPA Plan for approval within 30 days of the Final Audit Report being issued by the Board.

The Board will assess the implementation of all MPLL's corrective and preventive actions to confirm they are completed in a timely manner. The Board will also continue to monitor the overall implementation and effectiveness of MPLL's management system and programs through targeted compliance verification activities as a part of its ongoing regulatory mandate.

The Board will make its Final Audit Report and MPLL's approved CAPA Plan public on the Board's website.



Appendix I: Audit Assessment Tables

Background

The Board expects companies to have effective, fully developed and implemented management systems and protection programs and a strong culture of safety, all of which are fundamental to keep people safe and protect the environment. To that end, the OPR provides a specific requirements for the processes and other items that need to be part of these systems and programs.

The Audit Protocol (AP-01 to AP-12) is comprised of specific legal requirements against which the company's Integrity Management Program was assessed for compliance. During the audit, compliance to these legal requirements was examined to confirm that the requirements were met and that the relevant characteristics set out in sections 6.1, 6.5(2) and (3) of the OPR were also addressed.

OPR s. 6.1: A company shall establish, implement and maintain a management system that

(a) is systematic, explicit, comprehensive and proactive;

(b) integrates the company's operational activities and technical systems with its management of human and financial resources to enable the company to meet its obligations under section 6;

(c) applies to all the company's activities involving the design, construction, operation or abandonment of a pipeline and to the programs referred to in section 55;

(d) ensures coordination between the programs referred to in section 55; and

(e) corresponds to the size of the company, to the scope, nature and complexity of its activities and to the hazards and risks associated with those activities.

OPR s. 6.5 (2) In this section, a reference to a process includes any procedures that are necessary to implement the process.

(3) The company shall document the processes and procedures required by this section.



AP-01: Setting of Objectives and Specific Targets

<p>OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55, OPR s. 6.5(1)(a) establish and implement a process for setting the objectives and specific targets that are required to achieve the goals established under subsection 6.3(1) and for ensuring their annual review.</p>	
	Assessment
Accountabilities	<p>The Portland Montreal Integrity Managing System (PMIMS) <i>Element 1 – Management, Leadership, Commitment & Accountability</i> is MPLL’s governing document used to “set policy/expectations and provide perspective/resources for successful operations”. It describes, among other things, responsibilities and accountable resources for the PMIMS, from their senior management to the field employees. This documents also states that MPLL’s Senior Management Team (President and Department Heads) establish annual goals and objectives for PMIMS and for Safety, Security, Health and Environment (SSHE) that are congruent with corporate objectives. It also states that the Senior Management Team is responsible and accountable to identify, develop, prioritize and fund PMIMS initiatives and to set tactical integrity management goals. MPLL explained that performance is evaluated against these goals.</p> <p>However, even as some of the responsibilities and accountabilities are documented as explained above, since MPLL does not have a documented process for setting objectives and target (see “Process” section below), the roles and responsibilities are not clearly defined for all the people involved in this process such as the process owner, the approver of the objectives and targets, and those involved at both the program and management system meetings and reviews that are conducted for this process.</p>
Process	<p>In response to the information request, MPLL provided a written description of how it is setting its objectives and specific targets related to the integrity management program. MPLL stated that the setting of goals, objectives and targets are completed annually during the budgeting process, during the annual SSHE and PMIMS goals review, and during the annual review of the Portland Montreal Pipe Line (PMPL) Piping Integrity Program. During the annual budgeting process, Department Heads identify and secure funding to conduct integrity related activities in the following year. The SSHE and the PMIMS goals and objectives also drive the Piping Integrity Program.</p> <p>These goals are reviewed quarterly at the Management Safety, Security, Health and Environment (MSSHE) Meeting. These meetings also provide opportunities to adjust or improve the program objectives or targets when required. MPLL indicated that progress on the goals and objectives is also reported to its senior management bi-weekly at the Engineering steering Committee and monthly during the Monthly Maintenance Meeting and the Corrosion Review.</p>



OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55, **OPR s. 6.5(1)(a)** establish and implement a process for setting the objectives and specific targets that are required to achieve the goals established under subsection 6.3(1) and for ensuring their annual review.

Assessment

Evidence of the activities described above was found in a variety of separate documents that did not have clear links to each other and no one document contained the start to finish steps required for this process. Additionally, from the documentation provided, there was no indication of an approval process or an approver for the objectives and targets.

Integration and Application

In absence of a documented process for setting objectives and targets (see “Process” section above), **MPLL was unable to demonstrate that the process for setting objectives and targets was integrated with or linked to these OPR management system requirements that directly receive input from or provide input to:**

- OPR s. 6.3(1) - Policies and goals
- OPR s. 6.5(1)(b) - Performance Measures
- OPR s. 6.6(1)(a) - Annual Report

FINDING: Non-Compliant

Based on the scope of the audit, and the documents and interviews conducted, the company has not demonstrated that its process for setting objectives and targets, as applied to the integrity program, is compliant to the OPR s. 6.5(1)(a). MPLL does not have an explicit, comprehensive, and documented process for setting its objectives and targets. Roles and responsibilities for this process are not clearly defined, not all steps of the process are documented, and the process did not have explicit linkages to other interrelated management system requirements.



AP-02 Performance Measures

<p>OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55, OPR s. 6.5(1)(b) develop performance measures for assessing the company's success in achieving its goals, objectives and targets.</p>	
	<p>Assessment</p>
Accountabilities	<p>The PMIMS <i>Element 1 – Management, Leadership, Commitment & Accountability</i> is MPLL's governing document used to "set policy/expectations and provide perspective/resources for successful operations". It describes, among other things, responsibilities and accountable resources for the PMIMS, from their senior management to the field employees. This documents also states that MPLL's Senior Management Team establish annual goals and objectives for PMIMS and for Safety, Security, Health and Environment that are congruent with corporate objectives. It also states that the Senior Management Team is responsible and accountable to identify, develop, prioritize and fund PMIMS initiatives and to set tactical integrity management goals. MPLL explained that performance is evaluated against these goals.</p> <p>MPLL also provided its Piping Integrity Program 003.5 – Verification and Monitoring, which states PMPL will collect historical performance data each year starting in 2014 to evaluate the effectiveness of this integrity program. Other than stating that PMPL will collect data, this document does not assign specific roles, responsibilities, or accountabilities and this document does not make any reference to PMIMS Element 1.</p> <p>In the absence of clearly defined roles and responsibilities, it is unclear who needs to be involved and who is accountable to ensure performance measures are developed in accordance with OPR s. 6.5(1)(b).</p>
Performance Measures	<p>In response to the information request, MPLL provided a written description of how it sets its performance measures. MPLL stated that prior to integrity management activities, it is the responsibility of the project owner to complete an Authorization For Expenditure (AFE) and Project Charter (PC). The PC is approved by the Steering Committee and the AFE is approved per the Delegation of Authority. The PC includes Metrics, Vision Case and Expected results, and Critical Success Factors. Also, MPLL explained that the Senior Management Team is responsible to set tactical integrity management goals. Lastly, it also explained that the Piping Integrity Program Results Measures are reviewed during the annual effectiveness meeting.</p> <p>The written description provided above was not documented in any of the material provided. In absence of a document to describe how MPLL develop its performance measures, MPLL did not demonstrate that, as part of its management system and programs, it a had means to ensure that adequate performance measures are developed for assessing its success in achieving its goals, objectives and targets.</p> <p>Additionally, MPLL provided its <i>Annual Results Measures – Action Task List for 2018</i>, <i>PIP Process Measures 2018 Action Task List</i> and <i>Project Charter Worksheets</i>. The task lists provided a summary of itemized actions that were required to be completed along with timing (annual or quarterly), responsible</p>



OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55,
OPR s. 6.5(1)(b) develop performance measures for assessing the company's success in achieving its goals, objectives and targets.

	Assessment
	<p>person and comments and the project charter worksheets summarized the following: Business needs and benefits, Vision Case and expected results, Metrics, scope, goals/objectives and project classification.</p> <p>After review of the documents it was unclear how these task lists and worksheets related to MPLL's performance measures as they appeared to be tracking and reporting sheets of tasks and activities versus performance measures. In an attempt to gain better clarity, the Board requested that MPLL provided a concordance table of its Goals, Objectives, targets and performance measures. MPLL provided a table which contained the following goals: Zero Releases to the Environment, 9 objectives, 19 targets and 12 distinct performance measures.</p> <p>This concordance table did not demonstrate how the objectives and targets were established in a coordinated manner, with coordinated measures that would allow for on-going assessment of MPLL's success in achieving its goals, objectives and targets. The goals, objectives and targets were not correlated or linked to each other, and the performance measures were not linked to or assigned to any of the goals, objectives and targets. In addition, although MPLL provided a list of several indicators as "targets", these indicators had no target value indicated. For example, MPLL provided "% Repairs completed on time" as a target. This is not a target, this is an indicator or measure. Therefore, MPLL has not demonstrated that it has developed performance measures that will allow it to assess its success in achieving its goals, objectives and targets.</p>
Integration and Application	<p>In absence of a document describing how MPLL develops its performance measures, MPLL was unable to demonstrate how it links the development of its performance measures to these OPR management system requirements that directly receive input from or provide input to:</p> <ul style="list-style-type: none"> • OPR s. 6.3(1) - Policies and goals • OPR s. 6.5(1)(a) - Objectives and Targets Process • OPR s. 6.6(1)(a) - Annual Report

FINDING: Non-Compliant

Based on the scope of the audit, and the documents and interviews conducted, the company has not demonstrated that it has developed performance measures for assessing the company's success in achieving its goals, objectives and targets and MPLL is not compliant to the OPR s. 6.5(1)(b). MPLL did not have a document describing how it develops its performance measures. MPLL's performance measures were not clearly linked to its goals, objectives and targets and therefore MPLL did not demonstrate that its performance measures would allow it to assess its success in achieving its goals, objectives and targets.



AP-03 Hazard Identification and Analysis

OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55, **OPR s. 6.5(1)(c)** establish and implement a process for identifying and analyzing all hazards and potential hazards.

	Assessment
Accountabilities	<p>MPLL's <i>PMIMS Element 2 – Risk Management</i> is the company governing process for identifying and analyzing all hazards and potential hazards, and defines staff responsibilities and accountabilities for all levels of the organization, including the Board of Directors, President, the Senior Management Team, and MPLL employees.</p> <p>MPLL's <i>Piping Integrity Program (PIP)</i> further defines the responsibilities and accountabilities for personnel engaged in identifying and analyzing hazards and potential hazards facing the integrity of piping and pipeline facilities.</p> <p>Information provided during the interviews related to the roles and responsibilities for this process was consistent with the documentation provided.</p>
Process	<p>The company explained that the identification and analysis of integrity hazards and potential hazards is conducted and documented using the <i>High Level Risk Assessment (HLRA)</i> process, the <i>Baseline Assessment</i> process and the <i>Pipeline Risk Ranking</i> system. The HLRA process is documented in MPLL's <i>PMIMS Element 2 – Risk Management</i> document. The <i>Baseline Assessment</i> process and the <i>Pipeline Risk Ranking</i> system are documented in MPLL's PIP. The methodology used in those documents to identify and analyze integrity hazard describes how MPLL determines the susceptibility and severity of integrity hazards on a pipe segment basis, as part of the pipeline segments risk ranking. The list of integrity hazards considered in these documents is consistent with the standard list of integrity hazards known in the industry. MPLL demonstrated that its hazard analysis considers the interaction of integrity hazards. MPLL explained that the <i>Baseline Assessment</i> document has not been updated since 2005 and was then intended to be a one-time plan to address U.S.A. requirements at the time. However, MPLL also indicated that this document still continues to inform baseline assessments for pipeline segments that have been added more recently to MPLL's In-Line Inspection (ILI) assessment programs. The <i>Baseline Assessment</i> document <i>PI Subject Number 003.3 – Establish Baseline Assessment Plan</i> is a one-time plan that has not been updated to reflect today's practices and therefore does not adequately document this part of the process for identifying and analyzing hazards.</p> <p>The <i>PMIMS Element 2 – Risk Management</i> document states that employees have to identify hazards that were not included in the HLRA and that hazards related to facilities design and construction, facility security, personnel safety and occupational health, operation and maintenance, management of change and third party services are identified by the concerned personnel. However, this document does not describe how hazards are identified and does not refer to supporting procedures for identifying hazards. During the interviews, MPLL explained different methods and activities the company is using to identify integrity hazards, such as: facilities inspections (formal or not), right-of-way patrols, loss prevention observations, etc. The company also responded that: "<i>new hazards and potential hazards are identified through ongoing attention to industry, regulator, and operating information sources.</i>"</p>



OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55, **OPR s. 6.5(1)(c)** establish and implement a process for identifying and analyzing all hazards and potential hazards.

	Assessment
	<p>However, such methods or activities for identifying hazards are not explicitly described or included in the documentation provided for this process. These methods may be documented elsewhere in the company management system, program, manuals and procedures, but there is no one documented process provided that explicitly describes or refers to the different means by which the company identifies integrity hazards and potential hazards.</p> <p>Another issue identified with the integrity program and management system documentation provided for this process is that there is no reference to or link between the integrity program documents (the <i>Baseline Assessment</i> process and the <i>Pipeline Risk Ranking</i> system in the PIP) and the management system document (the <i>PMIMS Element 2 – Risk Management</i>). As such, it cannot be concluded from these independent documents that MPLL has an explicit process for identifying all integrity hazards and potential hazards that is part of its management system and integrity program.</p> <p>In order to ensure that the identification and analysis of integrity hazards is conducted by competent persons, MPLL explained that <i>PMIMS Element 2 – Risk Management</i> requires that higher level risk assessments are “performed by the Risk Assessment Team, assisted by risk assessment experts as required.” It further defines the involvement of knowledgeable site personnel and the provision of risk assessment methodology training. PMIMS further defines assigning qualified personnel to any task under <i>Element 5: Safety, Training and Personnel</i>, specifically at <i>IMS SN 5.1: Personnel Selection, Placement & Assessment</i>. The company also explained that staffing plans are developed, written job responsibility statements are generated, qualified personnel are retained, and continuing education plans are implemented. Expert consultants and vendors are engaged based on selection processes that include qualifications. The PIP further defines in <i>Managing System (MS) SN 003.3</i> that personnel executing the PIP are to have experience in pipeline integrity, developed through continuing education and participation in industry activity to gain and maintain knowledge.</p>
Supporting Procedures	In addition to process documentation, MPLL provided other supporting documents for this process related to regulatory compliance, incident investigation and MPLL’s <i>Loss Prevention System</i> . Information provided during the interviews was consistent with the documentation provided. From the sample of records review, no implementation issues were identified.
Integration and Application	MPLL explained that it operates all aspects of its business, including identifying and analyzing all integrity hazards and potential hazards, under the encompassing umbrella of PMIMS and its eleven elements. <i>PMIMS Element 2 – Risk Management</i> describes the integration between hazard identification and analysis, the hazard inventory, the risk evaluation, the controls and the management of change processes required by the OPR sections 6.5(1)(c), (d), (e), (f), and (i). However, this document did not provide an explicit link or reference to the internal reporting process required by the OPR s. 6.5(1)(r), which can be an input into the hazard identification and analysis process.



OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55, **OPR s. 6.5(1)(c)** establish and implement a process for identifying and analyzing all hazards and potential hazards.

Assessment

FINDING: Non-Compliant

Based on the scope of the audit, and the documents and interviews conducted, the company has not demonstrated that its process for identifying and analyzing hazards, as applied to the integrity program, is compliant to the OPR s. 6.5(1)(c). The process documentation provided was not sufficiently explicit and comprehensive to either describe or to provide clear links to documents describing all the means by which MPLL identifies integrity hazards and potential hazards. There was also no link between the integrity program documents provided and *PMIMS Element 2 – Risk Management*, and the *PMIMS Element 2 – Risk Management* document also had no explicit link to the internal reporting process. In addition, one of the integrity program document provided has not been updated to reflect current practices.



AP-04 Hazard Inventory

OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55, **OPR s. 6.5(1)(d)** establish and maintain an inventory of the identified hazards and potential hazards.

	Assessment
Accountabilities	<p>The <i>PMIMS Element 2 - Risk Management</i> is MPLL's governing process for identifying and analyzing all hazards and potential hazards, and defines staff responsibilities and accountabilities for all levels of the organization, including the Board of Directors, President, the Senior Management Team, and MPLL employees. MPLL generates its hazard inventory through the risk management process.</p> <p>Roles and accountabilities are defined on page 8 of 12 in the Risk Management document. At the senior level, the Board SSHE and President are responsible to monitor status of assessments against a three year plan, and provide support to risk prevention initiatives. The President approves risk plans. Other accountabilities are assigned to the senior management team, risk assessors and element champions.</p>
Hazard Inventory	<p>MPLL uses the risk assessment to build the hazards inventory. Page 2 of 12 of the risk assessment document provided, identifies the process steps for risk assessment and hazard identification. The document indicates that they perform their assessments at a frequency of every three years, or more frequently as required. They identify who performs the HLRA's (higher level risk assessments) and they indicate that the hazard inventory is made of all the risks that have been identified throughout the previous HLRA's and formal risk assessment and through other processes as determined by the Element 2 Champion.</p> <p>MPLL's <i>Enterprise Risk Management Framework</i> section, page 4 of 12, states that MPLL employees shall identify and categorize risk that were not identified in the high-level risk assessment through their continuous monitoring. These risks will be added to the three year risk assessment plan, as required. During the interviews, MPLL staff stated that, if a hazard is identified that has not been addressed previously, a formal risk assessment will be completed for that project.</p> <p>During the interviews the company was able to demonstrate they had a comprehensive list of hazards beyond the integrity hazards provided.</p>
Supporting Procedures	<p>MPLL did not provide other supporting procedures beyond those provided in answer to the "Process" section for AP-03 (process for hazard identification and analysis). There is therefore no assessment to make for this "Supporting Procedures" section.</p>
Integration and Application	<p>MPLL explained that it operates all aspects of its business, including identifying and analyzing all integrity hazards and potential hazards, under the encompassing umbrella of PMIMS and its eleven elements. <i>PMIMS Element 2 – Risk Management</i> describes the integration between hazard identification and analysis, the hazard inventory, the risk evaluation, the controls and the management of change processes required by the OPR sections 6.5(1)(c), (d), (e), (f), and (i).</p>



OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55, **OPR s. 6.5(1)(d)** establish and maintain an inventory of the identified hazards and potential hazards.

Assessment

FINDING: No issues noted

Based on the scope of the audit, and the documents and interviews conducted, the Board has not identified any non-compliances to the OPR s. 6.5(1)(d).



AP-05 Evaluating and Managing Risks

OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55,
OPR s. 6.5(1)(e) establish and implement a process for evaluating and managing the risks associated with the identified hazards, including the risks related to normal and abnormal operating conditions.

	Assessment
Accountabilities	<p>MPLL's <i>PMIMS Element 2 - Risk Management</i> defines staff responsibilities and accountabilities for all levels of the organization, including the Board of Directors, President, the Senior Management Team, and MPLL employees.</p> <p>MPLL's PIP further defines the responsibilities and accountabilities for personnel engaged in evaluating and managing the risks for the integrity program.</p> <p>Information provided during the interviews related to the roles and responsibilities for this process was consistent with the documentation provided.</p>
Process	<p>MPLL's <i>PMIMS Element 2- Risk Management</i> describes the process for evaluating and managing the risks, including the risk related to integrity hazards. This document describes how to conduct the HLRA and describes how to assess the risks and to develop risk management plans. Informal in-house risk assessments are conducted for lower category risks using the procedures and tools available in <i>PMIMS Element 2</i>. <i>PMIMS Element 2</i> states that category 1 and 2 level risks require a formal risk assessment. MPLL explained that it uses multiple tools and external resources to conduct formal risk assessments including Failure Modes and Effects Analysis, Hazard and Operability Study, PIP Risk Model, What-If Scenarios, and third party risk management experts. MPLL uses a risk matrix to categorize the risks assess through the HLRA process. Risks are categorized based on probability and consequence and MPLL has instructions for managing the different categories of risk in the <i>PMIMS Element 2 - Risk Management</i> and in its <i>Element 2: Risk Response Guidelines</i>. MPLL provided their three year risk assessment and risk management plan, demonstrating implementation of <i>PMIMS Element 2 - Risk Management</i> process document.</p> <p>MPLL also assessed the risk related to integrity hazards with the <i>Baseline Assessment</i> process and the <i>Pipeline Risk Ranking</i> system which are documented in MPLL's PIP. MPLL evaluates the risk for each pipeline segment based on the probability of failure and consequence of a potential release of product. Several factors are considered in the probability assessment, including but not limited to pipe segment attributes, ILI results, integrity hazards, maintenance and incident records, etc. MPLL explained that the <i>Baseline Assessment</i> document has not been updated since 2005 and was then intended to be a one-time plan to address U.S.A requirements of that time. However, MPLL also indicated that this document still continues to inform baseline assessments for pipeline segments that have been added more recently to MPLL's ILI assessment programs. The <i>Baseline Assessment</i> document <i>PI Subject Number 003.3 - Establish Baseline Assessment Plan</i> was a one-time plan that has not been updated to reflect today's practices and therefore does not adequately document this part of the process for evaluating and managing the risks.</p>



OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55, **OPR s. 6.5(1)(e)** establish and implement a process for evaluating and managing the risks associated with the identified hazards, including the risks related to normal and abnormal operating conditions.

Assessment

Another issue identified with the integrity program and management system documentation provided for this process is that **there is no reference to or link between the integrity program documents** (the *Baseline Assessment* process and the *Pipeline Risk Ranking* system in the PIP) **and the management system document** (the *PMIMS Element 2 – Risk Management*). **As such, it cannot be concluded from these independent documents that MPLL has an explicit process for evaluating and managing the risks that is part of its management system and integrity program.**

MPLL's PIP *Subject Number 003.3 – Identify Additional Preventive or Mitigative Actions* describes the methods for identifying additional mitigations to prevent and minimize the consequences of unintended releases for a High Consequence Area (HCA). MPLL has determined that the Canadian portion of its system is all within a HCA and this procedure therefore applies to all MPLL facilities in Canada.

PMIMS Element 2 - Risk Management, Section 2.1.1 states that the HLRA is performed every three years, or more frequently as required.

For the integrity program documents, as described above, **the *Baseline Assessment* document was intended to be a one-time plan and there is no review or re-evaluation criteria mentioned in that document or in PIP Subject Number 003.3 – Identify Additional Preventive or Mitigative Actions.**

Supporting Procedures

MPLL did not provide other supporting procedures beyond those provided in answer to the "Process" section above. There is therefore no assessment to make for this "Supporting Procedures" section.

Integration and Application

PMIMS Element 2 – Risk Management describes the integration with the hazard identification and analysis, the hazard inventory, the risk evaluation, the controls and the management of change processes required by the OPR sections 6.5(1)(c), (d), (e), (f), and (i).

FINDING: Non-Compliant

Based on the scope of the audit, and the documents and interviews conducted, the company has not demonstrated that its process for evaluating and managing the risks associated with the identified hazards, as applied to the integrity program, is compliant to the OPR s. 6.5(1)(e). The process documentation provided did not have a link between the integrity program documents provided and *PMIMS Element 2 – Risk Management*. In addition, one of the integrity program documents provided has not been updated to reflect current practices and, as a one-time plan, had no review or re-evaluation criteria.



AP-06 Developing and Implementing Controls

OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55, **OPR s. 6.5(1)(f)** establish and implement a process for developing and implementing controls to prevent, manage and mitigate the identified hazards and the risks and for communicating those controls to anyone who is exposed to the risks.

	Assessment
Accountabilities	<p>Roles and responsibilities for this process are documented in <i>PMIMS Element 2 - Risk Management</i>. This document defines staff responsibilities and accountabilities for all levels of the organization, including the Board of Directors, President, the Senior Management Team, and MPLL employees.</p> <p>MPLL's PIP further defines the responsibilities and accountabilities for personnel engaged in managing the risks, including developing and implementing controls, for the integrity program.</p> <p>Information provided during the interviews related to the roles and responsibilities for this process was consistent with the documentation provided.</p>
Process	<p><i>PMIMS Element 2 - Risk Management</i> section 2.1.1 <i>Risk Assessment and Hazard Identification</i>, section 2.1.2 <i>Assess Risk</i>, and section 2.1.3 <i>Risk Management Plan</i> document the process for how MPLL evaluates and controls the risk associated with the integrity hazards. <i>Element 2</i> also includes <i>Risk Response Guidelines</i> which provide the requirements for the development of mitigation plans, including timelines for developing them. Section 2.1.4 <i>Management Review and Risk Communication</i> of the same document describes the process for communicating risks and controls.</p> <p>At the integrity program level, MPLL indicated that the process is described in the <i>PMPL Piping Integrity Program Process Steps 003.3 04 Review Internal Assessment Results and Make Mitigation Decisions</i> and <i>05-Identifying Additional Preventative or Mitigating Actions</i>. From the interviews conducted and the sample of records reviewed, MPLL demonstrated that, except for the repair criteria discussed below, it has implemented adequate controls for the integrity hazards applicable to the facilities in scope for this audit.</p> <p>In the <i>PMPL Piping Integrity Program Process Steps 003.3 04 Review Internal Assessment Results and Make Mitigation Decisions</i> document, it is stated that the repair methods for addressing all threats to the physical condition of the pipeline shall comply with ASME B31.4 section 451.6 (Repairs). This is not the appropriate standard for repair criteria in Canada, which is CSA Z662. The company explained that they have evaluated the requirements of CSA Z662 and concluded that their piping integrity program ensured compliance with CSA Z662 even if ASME B31.4 is referred to instead of CSA Z662. The Board recognizes that there are similarities for the repair criteria between the two codes and that the issue here may simply be a matter of documentation, but the company did not provide clear evidence that the repair criteria referred to in that procedure are equivalent to the repair criteria of CSA Z662. There are also no guarantees that these two standards would not evolve with different repair criteria in the future and referring to the correct</p>



<p>OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55,</p> <p>OPR s. 6.5(1)(f) establish and implement a process for developing and implementing controls to prevent, manage and mitigate the identified hazards and the risks and for communicating those controls to anyone who is exposed to the risks.</p>	
	Assessment
	<p>standard is therefore important to ensure the proper criteria are applied now and to prevent future discrepancies. As such, MPLL did not demonstrate that it applies the proper controls to manage or mitigate threats to the physical condition of the pipeline as it relates to the repair criteria.</p> <p>Another issue identified with the integrity program and management system documentation provided for this process is that there is no reference to or link between the integrity program documents (PMPL Piping Integrity Program Process Steps 003.3 04 Review Internal Assessment Results and Make Mitigation Decisions and 05-Identifying Additional Preventative or Mitigating Actions) and the management system document (the PMIMS Element 2 – Risk Management). As such, it cannot be concluded from these independent documents that MPLL has an explicit process for developing and implementing controls that is part of its management system and integrity program.</p> <p>MPLL explained that <i>PMIMS Element 2</i> provides guidance for monitoring and analyzing the effectiveness of implemented controls. MPLL first evaluates the inherent risk without any controls in place, and then evaluates the residual risk with current controls in place. If additional controls are warranted, another final risk assessment is completed. MPLL explained that this process helps to identify key controls that eliminate or mitigate the risk, and to confirm their effectiveness.</p> <p>Section AP-10 of Appendix I of this audit report provides more details on the monitoring activities of the company to assess the effectiveness of the controls.</p>
Supporting Procedures	MPLL did not provide other supporting procedures beyond those provided in answer to the “Process” section above. There is therefore no assessment to make for this “Supporting Procedures” section.
Integration and Application	<i>PMIMS Element 2 – Risk Management</i> describes the integration with the hazard identification and analysis, the hazard inventory, the risk evaluation, the controls and the management of change processes required by the OPR sections 6.5(1)(c), (d), (e), (f), and (i).
Additional Information Reviewed	<p><u>Integrity Management Program</u></p> <p>MPLL demonstrated that it has a documented, established and implemented IMP. The IMP is available to all employees on the company online server. MPLL explained that the online version of the IMP is controlled and that changes are managed through the Management of Change (MOC) process. The IMP is periodically reviewed and updated as required. Based on the documentation provided, the interviews conducted and a sample of records reviewed,</p>



OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55,
OPR s. 6.5(1)(f) establish and implement a process for developing and implementing controls to prevent, manage and mitigate the identified hazards and the risks and for communicating those controls to anyone who is exposed to the risks.

Assessment

MPLL demonstrated that it has an IMP to anticipate, prevent, manage and mitigate the conditions that could result in a release from the facilities in scope from this audit. Further details on the activities conducted to control, inspect and monitor the integrity of the pipeline system are discussed in section AP-10 of this Appendix.

Operation and Maintenance Manual

MPLL demonstrated that it has a documented, established and implemented Operation and Maintenance (O&M) manual. The O&M manual is available to all employees online and in printed format at the work sites. MPLL explained that the O&M manual is controlled through the MOC process. It is reviewed by all users annually.

Pipeline Control System

MPLL demonstrated that it has a pipeline control system. The control room is located in Portland, Maine. MPLL uses a Supervisory Control and Data Acquisition (SCADA) system to control and monitor the pipeline operations. The SCADA records and monitors pipeline operations data, messages, and alarms. MPLL also has a leak detection system.

FINDING: Non-Compliant

Based on the scope of the audit, and the documents and interviews conducted, the company has not demonstrated that its process for developing and implementing controls to prevent, manage and mitigate the identified hazards and the risks and for communicating those controls to anyone who is exposed to the risks, as applied to the integrity program, is compliant to the OPR s. 6.5(1)(f). The process documentation provided did not have a link between the integrity program documents provided and *PMIMS Element 2 – Risk Management*. In addition, the *PMPL Piping Integrity Program Process Steps 003.3 04 Review Internal Assessment Results and Make Mitigation Decisions* document does not refer to CSA Z662 for the repair criteria.



AP-07 Coordinating and Controlling the Operational Activities

OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55,
OPR s. 6.5(1)(q) establish and implement a process for coordinating and controlling the operational activities of employees and other people working with or on behalf of the company so that each person is aware of the activities of others and has the information that will enable them to perform their duties in a manner that is safe, ensures the security of the pipeline and protects the environment.

	Assessment
Accountabilities	<p><i>PMIMS Element 6 – Operations and Maintenance, Subject Number 6.1 – Procedures, Inspection & Maintenance</i> defines staff responsibilities and accountabilities for this process for all levels of the organization, including the Senior Management team, MSSHE, Director of Operations and Quebec Area Manager, Secretary-treasurer, Field Personnel and Contractors.</p> <p><i>PMIMS Element 6 – Operations and Maintenance, Subject Number 6.3 – Work permit</i> guides all potentially hazardous work and tasks, and defines staff responsibilities and accountabilities for all levels of the organization, including the Senior Management team, MSSHE, Director of Operations and Quebec Area Manager, Secretary-treasurer, Field Personnel and Contractors.</p> <p><i>PMIMS Element 8 – Third party Services</i> applies to all third party services for the operating facilities that have the potential to harm people, environment or downgrade assets and it defines staff responsibilities and accountabilities for all levels of the organization, including the Board SSHE, the Senior Management team, MSSHE, Director of Operations and Quebec Area Manager, Secretary-treasurer, Field Personnel and Contractors.</p> <p>Information provided during the interviews related to the roles and responsibilities for this process was consistent with the documentation provided.</p>
Process	<p>MPLL's <i>Element 6 – Operations and Maintenance, Subject Number 6.1 – Procedures, Inspection & Maintenance</i> document identifies the need for operating and maintenance procedures, managing risk, communicating procedures, implementing procedures, training employees, evaluating effectiveness of procedures and reviews and revisions. The operating and maintenance procedures address the activities of each operating phase, such as startup, normal operations, emergency shutdown, emergency operation, normal shutdown, etc. and how the safety, security, health and environmental risks associated with the particular activities being described are to be managed. <i>PMIMS Element 2 – Risk Management</i> provides guidance on management of risks.</p> <p>MPLL's <i>PMIMS Element 6 – Operations and Maintenance, Subject Number 6.3 – Work permit</i> document identifies the need for potentially hazardous work and tasks to be conducted under an approved "Work Permit" for the operating facilities. Similar to <i>Element 6 – Operations and Maintenance, Subject Number 6.1</i>, it includes process steps for the development of procedures and work permits, it provides integration with other procedures (specifically with</p>



<p>OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55,</p> <p>OPR s. 6.5(1)(q) establish and implement a process for coordinating and controlling the operational activities of employees and other people working with or on behalf of the company so that each person is aware of the activities of others and has the information that will enable them to perform their duties in a manner that is safe, ensures the security of the pipeline and protects the environment.</p>	
	Assessment
	<p>MPLL Critical Operations and Maintenance Procedure), defines the skill set required, communication procedures, employee training, evaluation and review and revision, with all areas being specific to the Safe Work Permit.</p> <p>MPLL's, <i>PMIMS Element 8 – Third party Services</i> document identifies the need to define work with third party service providers with a desired result of incident reduction in both frequency and severity, personnel understanding the expectations and requirements of contractor agreements, contractor personnel supporting the company safety, security, health and environmental performance and compliance with PMPL and regulatory requirements.</p> <p>Although MPLL submitted multiple procedures that provided direction on how to coordinate and control specific work activities, MPLL did not have an overarching process document that describes all related activities and requirements for this section. Each document provided stands alone, defining the scope and accountabilities for its unique function and providing control and coordination over its activity in isolation of other operational activities.</p> <p>These procedures do not link to or reference each other, which could potentially allow for one of the levels of control defined in each specific procedures to be missed and thereby exposing employees to potential hazards. For example, the “Third Party Service” procedure does not reference or link to the “Work Permit” which provides guidance on how to control and conduct potentially hazardous work.</p>
Supporting Procedures	MPLL did not provide other supporting procedures beyond those provided in answer to the “Process” section above. There is therefore no assessment to make for this “Supporting Procedures” section.
Integration and Application	<p>In absence of a documented process (see “Process” section above), MPLL was unable to demonstrate that its process for coordinating and controlling the operational activities of employees and other people working with or on behalf of the company was integrated with or linked to these OPR management system requirements that directly receive input from or provide input to:</p> <ul style="list-style-type: none"> • s. 6.5(1)(l) Management System and Technical Program Responsibility Awareness • s. 6.5(1)(m) Internal and External Communication Process



OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55,
OPR s. 6.5(1)(q) establish and implement a process for coordinating and controlling the operational activities of employees and other people working with or on behalf of the company so that each person is aware of the activities of others and has the information that will enable them to perform their duties in a manner that is safe, ensures the security of the pipeline and protects the environment.

Assessment

FINDING: Non-Compliant

Based on the scope of the audit, and the documents and interviews conducted, the company has not demonstrated that its process for coordinating and controlling the operational activities of employees and other people working with or on behalf of the company, as applied to the integrity program, is compliant to the OPR s. 6.5(1)(q). MPLL provided several documents that outlined the various activities that are undertaken for coordinating and controlling the operational activities of employees and others working with or on behalf of the company. Each document provided stands alone, defining the scope and accountabilities for its unique function, without linking or referencing each other. There is no one document that contained the start to finish steps required for this process.



AP-08 Internal Reporting of Hazards, Incidents and Near-Misses

OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55,
OPR s. 6.5(1)(r) establish and implement a process for the internal reporting of hazards, potential hazards, incidents and near-misses and for taking corrective and preventive actions, including the steps to manage imminent hazards.

	Assessment
Accountabilities	<p>The corporate policy on business ethics defines the policy for reporting and investigating, and explains the employee indemnification for reporting of incidents or hazards.</p> <p><i>PMIMS Element 9: Incident Investigation</i> governs MPLL's process for internal reporting of hazards, potential hazards, incidents, and near loss incidents, and for taking corrective and preventive actions, and defines staff responsibilities and accountabilities across all levels of the organization.</p> <p>Under <i>PMIMS Element 9</i>, the company's <i>Loss Prevention System (LPS)</i> further governs the procedures and tools for hazard and incident reporting and mitigation. LPS includes a <i>Loss Investigation Responsibility Matrix</i> defining personnel responsible and accountable for the process. Employee-level participation responsibilities are provided in the <i>LPS Responsibility Summary – Loss Investigations / Near Loss Investigations</i>.</p> <p>Information provided during the interviews related to the roles and responsibilities for this process was consistent with the documentation provided.</p>
Process	<p>MPLL uses an off-the-shelf database called LPS that provides process steps including reporting, investigation and follow-up. The system has been customized to reflect MPLL structure and management. The LPS provides reporting tools and templates, and implements the company's LPS Database, software that is accessible to all employees for immediate documentation and sharing. The software provides structure that facilitates and ensures that employees complete reporting and investigation consistently and in accordance with <i>Element 9</i> and LPS requirements.</p> <p>The <i>Loss/Near Loss Investigation Responsibility Matrix</i> presented defines incidents, hazards, potential hazards and near misses (including integrity related), and breaks them down into Major, Serious and Minor.</p> <p><i>PMIMS Element 5: Safety, Training and Personnel</i> governs MPLL's training programs including for incident reporting and investigation under <i>Element 9</i>. MPLL explained that contractor personnel working on behalf of the company are required to report incidents, near loss incidents and hazards to the company, and to participate in incident investigations. Contract services are governed by <i>PMIMS Element 8: Third-party Services</i>, and contractor personnel are trained on the obligation to report and investigate incidents through the <i>Contractor Field Orientation</i> process and checklist.</p>



OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55, **OPR s. 6.5(1)(r)** establish and implement a process for the internal reporting of hazards, potential hazards, incidents and near-misses and for taking corrective and preventive actions, including the steps to manage imminent hazards.

Assessment

MPLL management provided the audit team with copies of the signed attendance sheets for training in reporting, investigation techniques, and follow up. MPLL confirmed that all MPLL employees received the training. MPLL supplied meeting minutes and attendance records for weekly, monthly, quarterly meetings where incidents and hazard/potential hazards are communicated, demonstrating implementation of the process.

Supporting Procedures MPLL did not provide other supporting procedures beyond those provided in answer to the “Process” section above. There is therefore no assessment to make for this “Supporting Procedures” section.

Integration and Application MPLL’s LPS provides process steps including reporting, investigation and follow-up. The system is used for all events and for reporting any incidents that would occur associated with the OPR section 55 required programs.

FINDING: No issued noted

Based on the scope of the audit, and the documents and interviews conducted, the Board has not identified any non-compliances to the OPR s. 6.5(1)(r).



AP-09 Developing Contingency Plans

OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55, **OPR s. 6.5(1)(t)** establish and implement a process for developing contingency plans for abnormal events that may occur during construction, operation, maintenance, abandonment or emergency situations.

	Assessment
Accountabilities	MPLL indicated that PMIMS provides strategic direction for all the management system elements including emergency and contingency planning. MPLL also explained that roles and responsibilities for contingency plans are described in the <i>Incident Command System</i> (ICS) documents. The auditors note that employees interviewed (making up the 80 % of MPLL's management) knew their responsibilities and roles regarding this requirement. However, even as some of the roles and responsibilities are documented in the documents provided, since MPLL does not have a documented process for developing contingency plans for abnormal events (see "Process" section below), MPLL could not demonstrate that the roles and responsibilities are properly documented for all the people involved in this process.
Process	<p>The company's strategic plan references the ICS that the company follows. The company, through interviews, directed the audit team to the O&M manual sections 8.2 and 8.3 and pages 301 and 302 for procedures and processes to deal with abnormal conditions associated to integrity. These sections described some actions to be taken but did not describe a process for developing contingency plans.</p> <p>The employees interviewed could describe what to do and could point to the various procedures and documents that would lead to contingency plans. However, the company did not provide a documented process for developing contingency plans for abnormal events that may occur during construction, operation, maintenance, abandonment or emergency situations.</p>
Supporting Procedures	MPLL did not provide other supporting procedures beyond those provided in answer to the "Process" section above. There is therefore no assessment to make for this "Supporting Procedures" section.
Integration and Application	<p>In absence of a documented process as required by the OPR s. 6.5(1)(t) (see "Process" section above), MPLL was unable to demonstrate that this process was integrated with or linked to these OPR management system requirements that directly receive input from or provide input to this process:</p> <ul style="list-style-type: none"> • OPR s. 6.5(1)(e) – Risk Evaluation Process • OPR s. 6.5(1)(f) – Controls Process • OPR s. 6.5(1)(q) – Operational Activities Process



OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55,
OPR s. 6.5(1)(t) establish and implement a process for developing contingency plans for abnormal events that may occur during construction, operation, maintenance, abandonment or emergency situations.

	Assessment
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FINDING: Non-Compliant

Based on the scope of the audit, and the documents and interviews conducted, the company has not demonstrated that its process for developing contingency plans for abnormal events as applied to the integrity program, is compliant to the OPR s. 6.5(1)(t). MPLL did not have a documented process for developing contingency plans.



AP-10 Inspect and Monitor

OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55, **OPR s. 6.5(1)(u)** establish and implement a process for inspecting and monitoring the company's activities and facilities to evaluate the adequacy and effectiveness of the programs referred to in section 55 and for taking corrective and preventive actions if deficiencies are identified.

	Assessment
Accountabilities	<p>MPLL provided <i>Element 11: Master Plan for Other Compliance Surveys</i> which list the staff responsible for the different compliance surveys listed in that document. However, even as some of the responsibilities are documented in this document, since MPLL does not have a documented process for inspecting and monitoring its activities and facilities (see "Process" section below), MPLL could not demonstrate that the roles and responsibilities are properly documented for all the people involved in this process.</p>
Process	<p>MPLL explained that inspection and monitoring of activities and facilities are completed at various times throughout the year and that many inspections are completed by operations and maintenance personnel during routine inspections. These include atmospheric corrosion inspections, soil to air interface inspections, close interval surveys, pipe to soil readings, valve inspections, facility coating projects and inspections, ILI's, dead leg inspections or removals, nitrogen displacements, cleaning scrapers, and other activities. MPLL mentioned that if any of these inspections determine the Piping Integrity Program is inadequate, a work order will be created to alleviate the deficiency.</p> <p>MPLL also provided different documents that describes their inspections and monitoring activities:</p> <ul style="list-style-type: none"> • <i>Element 1: Field Compliance Verification Processes and Tools</i> • <i>PIP Subject Number 003.5 Program Effectiveness Measurement and Documentation</i> • <i>PMPL Operations and Maintenance Manual (relevant sections only)</i> • <i>PIP Subject 005.1 – Procedures by which periodic integrity assessments are performed</i> • <i>PMIMS Element 6: Procedures, Inspection and Maintenance</i> <p>The company also explained that inspection and monitoring requirements for the following activities are defined in the <i>PMPL Operations and Maintenance Manual</i>:</p> <ul style="list-style-type: none"> • <i>Cathodic Protection System Testing (Entire pipeline system on a four year cycle)</i> • <i>Annual Surveys (Pipe to soil readings on an annual basis)</i> • <i>Atmospheric Corrosion (Annual)</i>



OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55,
OPR s. 6.5(1)(u) establish and implement a process for inspecting and monitoring the company's activities and facilities to evaluate the adequacy and effectiveness of the programs referred to in section 55 and for taking corrective and preventive actions if deficiencies are identified.

Assessment

- *Close Interval Survey (Entire pipeline system on a four year cycle)*
- *Interference Testing (annual)*
- *HVDC Interference and Recordings*
- *Cleaning Scrapers*
- *Block Valves (Semi-annual)*

The 24 inch mainline is in-line inspected to assess the condition of the pipeline. The integrity threat assessed by ILI for this line are metal loss (this includes internal and external corrosion) and deformations. The company explained that cracking is not a significant threat on this pipeline system, having no history of cracking issues, and due to the nature of the seam weld (double submerged arc weld), the coating system, and no aggressive pressure cycling. The company explained that it inspects the pipeline for cracks whenever it conducts an integrity dig on the line by using non-destructive examinations for cracks on the welds and pipe body. The company provided inspection records and procedures that supported its statements. The frequency of inspection by ILI is not to exceed five years or as dictated by the anomaly growth assessment.

Document *PIP Subject 005.1 – Procedures by which periodic integrity assessments are performed* indicates that an evaluation is conducted to compare the current physical condition of the pipe with the previously available data and that based on that evaluation, the next integrity assessment interval is determined.

MPLL explained that it develops, implements and tracks to closure corrective and preventive actions, mostly through the company work order system for routine operations and maintenance items. Larger scale actions may be tracked through meeting notes, or individual corrective action plans based on a specific program or inspection. Examples of this include the *Annual Review of Piping Integrity Program Meeting Notes* which track any follow-ups.

From the interviews conducted and the sample of records reviewed, MPLL demonstrated that it has implemented adequate inspection and monitoring activities for the integrity hazards applicable to the facilities in scope for this audit. However, although MPLL provided several documents describing its inspection and monitoring activities, **these separate documents do not constitute a process for inspecting and monitoring the company's activities and facilities to evaluate the adequacy and effectiveness of the integrity program and for taking corrective and preventive actions if deficiencies are identified. MPLL did not have a document describing all the steps for achieving the goals intended for this process and how this is done as**



<p>OPR s. 6.5(1) A company shall, as part of its management system and the programs referred to in section 55, OPR s. 6.5(1)(u) establish and implement a process for inspecting and monitoring the company's activities and facilities to evaluate the adequacy and effectiveness of the programs referred to in section 55 and for taking corrective and preventive actions if deficiencies are identified.</p>	
	Assessment
	part of the management system and the integrity program. MPLL also did not have a document to explicitly link or refer to all the necessary supporting procedures for the implementation of the process, such as the documents provided above.
Supporting Procedures	MPLL did not provide other supporting procedures beyond those provided in answer to the "Process" section above. There is therefore no assessment to make for this "Supporting Procedures" section.
Integration and Application	In absence of a documented process as required by the OPR s. 6.5(1)(u) (see "Process" section above), MPLL was unable to demonstrate that this process was integrated with or linked to these OPR management system requirements that directly receive input from or provide input to this process: <ul style="list-style-type: none"> • OPR s. 6.5(1)(w) - Quality Assurance Program • OPR s. 55(1) - Audits
Additional Information Reviewed	<p><u>Surveillance and Monitoring</u> MPLL demonstrated that it has established and implemented a monitoring and surveillance program. MPLL conducts aerial patrols once every two weeks not to exceed 21 day of the pipeline right-of-way and facilities. MPLL also conducts ground patrols and surveillance during normal routine maintenance and travel activities. These activities are documented in the <i>PMPL Operations and Maintenance Manual</i>.</p> <p><u>Class Location Changes</u> MPLL indicated that this was not applicable to their facilities because it operates in low vapour pressure crude oil service and that it uses a safety factor of 0.72 for its repair criteria regardless of the class location, which satisfies the requirements of CSA Z662-15 clauses 10.10.2.5 and 10.11.2.3.</p>
<p>FINDING: Non-Compliant</p> <p>Based on the scope of the audit, and the documents and interviews conducted, the company has not demonstrated that its process for inspecting and monitoring the company's activities and facilities to evaluate the adequacy and effectiveness of the programs referred to in section 55 and for taking corrective and preventive actions if deficiencies are identified, as applied to the integrity program, is compliant to the OPR s. 6.5(1)(u). MPLL does not have an explicit, comprehensive, and documented process for the OPR s. 6.5(1)(u). Therefore MPLL could also not demonstrate that it has properly documented the roles and responsibilities, that it has documented all the necessary steps, and that it has explicit linkages to other interrelated management system requirements for this process.</p>	



AP-11 Annual Report

<p>OPR s. 6.6(1) A company shall complete an annual report for the previous calendar year, signed by the accountable officer, that describes</p> <p>(a) the performance of the company's management system in meeting its obligations under section 6 and the company's achievement of its goals, objectives and targets during that year, as measured by the performance measures developed under paragraphs 6.5(1)(b) and (v); and</p> <p>(b) the actions taken during that year to correct any deficiencies identified by the quality assurance program established under paragraph 6.5(1)(w).</p>	
	Assessment
Annual Report	<p>The company provided a copy of an annual summary document (<i>2018 NEB Annual Report for Calendar Year 2017</i>) dated 2 March 2018 signed by the Accountable Officer Thomas A. Hardison. The summary report was prepared by the manager of Health Safety and Environment. MPLL referenced in this document its annual goals for safety, security and environmental performance, which are zero employee or contractor recordable injuries, medical aid or fatalities, zero security incidents, and zero releases of product to the environment. The annual summary document indicated that with zero recordable incidents, MPLL had met all its goals for 2017.</p> <p>The annual summary document described that MPLL completed an internal assessment of their management system <i>PMIMS</i> manual in 2017, where the overall effectiveness was assessed at an average of 3.88 out of 4. It also described that MPLL developed and implemented a corrective action plan to address the continuous improvement opportunities identified during the assessment. The annual summary document also stated that two internal audits related to section 55 of the OPR were completed in 2017 and that no deficiencies were identified.</p> <p>Although the annual summary document stated that MPLL met all its goals for 2017, the annual report did not mention any integrity related performance measures, targets or objectives. The annual report failed to describe the achievement of goals, objectives and targets, as measured by its performance measures, for the integrity program.</p>
<p>FINDING: Non-Compliant</p> <p>Based on the scope of the audit, and the documents and interviews conducted, the company has not demonstrated that its annual report met the requirements of the OPR s. 6.6 (1). MPLL's annual report did not properly describe the company's achievement of its goals, objectives and targets, as measured by its performance measures.</p>	



AP-12 Integrity Program Audits

OPR s. 55(1) A company shall conduct audits, with a maximum interval of three years, of the following programs

- (a) the emergency management program referred to in section 32;
- (b) the integrity management program referred to in section 40, including the pipeline control system referred to in section 37;
- (c) the safety management program referred to in section 47;
- (d) the security management program referred to in section 47.1;
- (e) the environmental protection program referred to in section 48; and
- (f) the damage prevention program referred to in section 47.2.

(2) The documents prepared following the audit shall include

- (a) any deficiencies noted; and
- (b) any corrective action taken or planned to be taken.

	Assessment
Integrity Program Audits	<p>MPLL indicated in response to the information request that it conducts internal audits of the integrity program at least every three years using an internally developed audit framework. MPLL explained that the audit is conducted by the Manager of Health, Safety and Environment. MPLL referenced an Integrity audit related to section 55 of the OPR in the annual summary document (<i>2018 NEB Annual Report for Calendar Year 2017</i>) and provided a copy of the report, named <i>PMPL PMIMS Assessment Report</i>. The 2017 assessment covered core processes and associated operations based on sample verifications at specified locations.</p> <p>The assessment was based on the requirements of the company management system <i>PMIMS</i> and referenced the <i>MPLL Operations & Maintenance Manual</i>. The audit (assessment) looked at employee compliance to a selection of procedures into <i>PMIMS</i> and the <i>Operations & Maintenance Manual</i>.</p> <p>The audit did not assess the integrity program to ensure compliance to the OPR requirements. MPLL provided an assessment that was based on compliance to its own procedures and management system but did not audit those procedures or management system against the regulations. As such, the company did not complete an integrity program audit as per sections 53 and 55 of the OPR in the last 3 years.</p>
<p>FINDING: Non-Compliant</p> <p>Based on the scope of the audit, and the documents and interviews conducted, the company has not demonstrated that it has met the audit requirements of the OPR sections 53 and 55(1). MPLL's audit did not ensure compliance with the OPR requirements.</p>	



Appendix II: Abbreviations

AFE:	Authorization for Expenditure
AP:	Audit Protocol
CAPA Plan:	Corrective and Preventative Action Plan
CSA Z662-15:	CSA Standard Z662 entitled <i>Oil and Gas Pipeline Systems</i> , 2015 version
HCA:	High Consequence Area
HLRA:	High Level Risk Assessment
ICS:	Incident Command System
ILI:	In-Line Inspection
IMP:	Integrity Management Program
LPS:	Loss Prevention System
MOC:	Management of Change
MPLL:	Montreal Pipe Line Limited
MSSHE:	Management Safety, Security, Health and Environment
NEB:	National Energy Board
O&M:	Operation and Maintenance
OPR:	National Energy Board <i>Onshore Pipeline Regulations</i>
PC:	Project Chart
PIP:	Piping Integrity Program
PMIMS:	Portland Montreal Integrity Managing System
PMPL:	Portland Montreal Pipe Line
SCADA:	Supervisory Control and Data Acquisition
SSHE:	Safety, Security, Health and Environment
U.S.A:	United States of America

Appendix III: Documents and Records Reviewed

-  AP01-1.1 IMS (Integrity Managing Systems) 001.1.pdf
-  AP01-1.2 PIP Effectiveness Measurement and Documentation.pdf
-  AP01-1.3 Annual Results Measures.pdf
-  AP01-1.4 Piping Integrity Program Process Step 003.4 Responsible and Acco...
-  AP01-2.1 MSSHE Agenda.pdf
-  AP01-4.1 Engineering Steering Committee Notes.pdf
-  AP01-4.2 Monthly Maintenance Review.pdf
-  AP01-4.3 Corrosion Review.pdf
-  AP01-5.1 2018 NEB Annual Report for Calendar Year 2017.pdf
-  AP01-6.1 Annual Review of PIP.pdf

-  AP02-1.1 2017 Facility Piping Integrity Assessment AFE and PC.pdf

-  AP02-2.1 Post Audit Example.pdf

-  AP02-2.2 Annual Results Measures 2018.pdf















-  AP02-2.2 Example AFE_PC for 2018 Project (Deadleg Program).pdf

-  AP02-3.1 PIP Process Measures.pdf

-  AP02-3.2 PIP ATL Repairs and Assessments.pdf

-  AP02-3.3 PIP ATL Framework.pdf



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-  AP03-1.1 PMIMS IMS SN 2.1 Risk Management.pdf
 -  AP03-1.2 PIP MS SN 003.4 Responsible and Accountable Resources.pdf
 -  AP03-2.1 PMIMS P&T SN 2.08 Conducting the Higher Level Risk Assessment...
 -  AP03-2.2 PIP P&T SN 005.1 S02 Analyze Risk Associated with Pipeline Segm...
 -  AP03-2.3 PMIMS IMS SN 5.1 Personnel Selection, Placement & Assessment...
 -  AP03-2.4 PIP MS SN 003.3 Overview and Execution.pdf
 -  AP03-2.5 PIP MS SN 003.3 S04 Review Internal Integrity Assessment Results...
 -  AP03-2.6 PIP P&T SN 005.1 S03 Establish Baseline Assessment Plan.pdf
 -  AP03-2.7 PIP P&T SN 005.1 S04a Reviewing Integrity Results and Making Mi...
 -  AP03-2.8 PMIMS IMS SN 6.7 Regulatory Compliance.pdf
 -  AP03-2.9 PMIMS IMS SN 1.1 Management, Leadership, Commitment & Acc...
 -  AP04-2.1 Document Management System excerpt - HLRA retention.pdf
 -  AP04-4.1 PMIMS IMS SN 4.1 Information & Documentation.pdf
 -  AP05-2 F PMIMS Element 2 PMPL Risk Response Guideline .pdf
 -  AP05-2 PMIMS Element 2 PMPL Risk Matrix .pdf
 -  AP05-4.1 PMIMS Element 7 Management of Change.pdf



AP06-1.1 PMIMS Element 2 Risk Management IMS.pdf



AP06-2.2 PMIMS Element 6.7 Regulatory Compliance.pdf



AP06-2.3 Review Internal Assessment Results and make Mitigation Decision...



AP06-2.4 Identify additional Preventative or Mitigative Actions.pdf



AP06-2.5 Risk Response Guidelines.pdf



AP07- 4.1 PMIMS Element 6.3 Work Permit.pdf



AP07-1.1 PMIMS Element 6 Operations and Maintenance.pdf






















AP07-2.0 B PMIMS Element 8 Third Party Services.pdf





















AP07-2.4 PMPL Safe Work Permit and Safety Work Check Chart.pdf



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-  AP08-1.1 PMIMS IMS SN 9.1 Incident Investigation, Analysis & Sharing of Le...
 -  AP08-1.2 LPS Loss Investigation Responsibility Matrix.pdf
 -  AP08-1.3 LPS Responsibility Summary - Loss Investigation - Near Loss Invest...
 -  AP08-2.1 PMIMS P&T SN 9.04 Definitions - Incident Classification Criteria.pdf
 -  AP08-2.10 PMIMS P&T SN 8.09 Contractor Field Orientation Checklist.pdf
 -  AP08-2.11 LPS Database Report Example.pdf
 -  AP08-2.12 Weekly Staff Meeting Notes Example.pdf
 -  AP08-2.13 PMIMS 9.1.5 Q1 2018 Incident Statistics, Trends, and Common C...
 -  AP08-2.2 LPS Communication Tools.pdf
 -  AP08-2.3 PMIMS P&T SN 9.05 Incident Investigation Criteria.pdf
 -  AP08-2.4 PMIMS P&T SN 9.05 Incident Risk Analysis Tool.pdf
 -  AP08-2.5 FOMC Sec 040 SN 003 Corporate Planning & Performance Monito...
 -  AP08-2.6 LPS Loss Investigation Form.pdf
 -  AP08-2.7 LPS Loss Investigation Process.pdf
 -  AP08-2.8 LPS Guide for Determination of Root Causes & Corresponding Rec...
 -  AP08-2.9 PMIMS P&T SN 9.11 Causal Factor Why Tree.pdf
 -  AP08-3.1 PMPL Hurricane Preparedness Plan.pdf
 -  AP08-4.1 Document Management System - repair documentation.pdf
 -  AP09-4.1 MPLL FLRA.pdf



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-  [AP10-1.1 Element 11 Procedure and Tools 11.01.pdf](#)
 -  [AP10-2.2 PMPL Cathodic Protection System testing.pdf](#)
 -  [AP10-2.3 Cleaning Scraper Schedule.pdf](#)
 -  [AP10-2.4 Block Valves.pdf](#)
 -  [AP10-4.1 Gap Closure Plan Template.pdf](#)
 -  [AP10-4.2 Section 7 O&M Manual.pdf](#)
 -  [AP10-4.3 Figure 25 & 26 O&M Manual.pdf](#)
 -  [AP10-5.1 2017-12 IMP- MPL PIP- Complete.pdf](#)
 -  [AP11-1.1 2017 Annual Report.pdf](#)
 -  [2015 Incident Investigation Training Sign Off Sheet.pdf](#)
 -  [Corrosion Growth Rates.pdf](#)
 -  [Effectiveness P&T.pdf](#)
 -  [PMIMS Table of Contents.pdf](#)
 -  [Risk model example.pdf](#)
 -  [Policy Element 1 Management Framework.pdf](#)
 -  [ICS Job Descriptions \(ICP Appendix B\).pdf](#)
 -  [PMPL O&M Manual sections 8.2 and 8.3 - Abnormal Operating Conditions.p...](#)
 -  [PMPL O&M Manual- Procedure Development.pdf](#)



PMIMS Element 10 IMS.pdf



PMIMS Element 11 IMS.pdf



2017 Internal PMIMS Audit Schedule.pdf



DO NOT PRINT or DOWNLOAD-2017 Internal PMIMS Gap Closure List.pdf



DO NOT PRINT or DOWNLOAD-PMPL PMIMS Assessment Report 2017 (PM...



Scoring Assessment_2017.pdf



2017 PMIMS Results Measures.pdf



Element 11_ Master Plan for Other Compliance Surveys.pdf



PMIMS Element 11_ Gap Closure Plans.pdf



PMIMS Element 11_ Procedures for Conducting an Assessment.pdf



D2 D1 2013 Risk Model Results for MPLL Pipeline Segments.pdf



D2 D2 PMPL PIP Risk Model Description Document.pdf



01 PMIMS Element 6 IMS.pdf



02 Montreal Terminal Inspection Form.pdf





















03 PMIMS Element 1 Field Compliance Verification.pdf



04 Loss Control Tours Facilities Inspection Checklist (PMIMS 6.10).pdf



MPLL Buried Piping Integrity Program.pdf

-
-  Policy Element 1 Management Framework.pdf
 -  ICS Job Descriptions (ICP Appendix B).pdf
 -  PMPL O&M Manual sections 8.2 and 8.3 - Abnormal Operating Conditions.p...
-
-  PMPL O&M Manual- Procedure Development.pdf
-
-  PMIMS Element 10 IMS.pdf
 -  PMIMS Element 11 IMS.pdf
 -  2017 HLRA risk management plan
 -  MPLL Summary of HLRA Integrity Hazards
 -  IR-2.2.a HCA-CA in QC from consultant.pdf
 -  IR-2.2.b HCA Definitions.pdf
-
-  IR-2.3 PIP applies CSA Z662.pdf
-
-  2018 MPLL Atmospheric Corrosion Inspection.pdf
-
-  IR2.4a Most Recent Annual Survey Results.pdf
 -  IR2.4a Most Recent Close Interval Survey Report.pdf
 -  IR2.4d Coating Inspection for digs.pdf
-
-  PMIMS Element 4 - Procedures and Tools Manual and Procedures Listing.pdf
 -  PIP SN 005.1 S 04a with Figures 1-1 through 1-5.pdf
-
-  Ten Field Inspection Dig Sheets for Main Lines.pdf



Appendix IV: Company Representatives Interviewed

Company Representative Interviewed	Job Title
[REDACTED]	Quebec Area Manager
[REDACTED]	Manager of Control Center Operations
[REDACTED]	Engineering Manager