



File OF-Surv-OpAud-E101-2014-2015 03
31 March 2015

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Accountable Officer under the NEB Act
Enbridge Pipelines Inc.
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Facsimile [REDACTED]

Dear Mr. Jarvis:

**Enbridge Pipelines Inc. (Enbridge) and its Board-Regulated Subsidiaries
*National Energy Board Onshore Pipeline Regulations, (OPR) Final Audit Report
Emergency Management Program***

The Board has completed its Final Report for its audit of Enbridge's Emergency Management Program.

A Draft Report documenting the Board's evaluation of Enbridge's Emergency Management Program was provided to Enbridge on 4 February 2015 for review and comment. On 6 March 2015, Enbridge submitted its response.

The Board has considered Enbridge's comments and has made changes to the Final Audit Report and its Appendices as it determined to be appropriate.

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

- *National Energy Board Act;*
- *National Energy Board Onshore Pipeline Regulations;* and
- Enbridge's policies, programs, practices and procedures.

Enbridge was required to demonstrate the adequacy and effectiveness of the methods selected and employed within its Programs to meet the regulatory requirements listed above.

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The Board has enclosed the Final Audit Report and associated appendices with this letter. The Board will make the Final Audit Report public on the Board's website.

Within 30 days of the issuance of the Final Audit Report by the Board, Enbridge is required to file a Corrective Action Plan (CAP), which describes the methods and timing for addressing the Non-Compliant findings identified through this audit, for approval.

The Board will make the CAP public and will continue to monitor and assess all of Enbridge'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 Enbridge's Emergency Management Program and management system through targeted compliance verification activities as a part of its on-going regulatory mandate.

If you require any further information or clarification, please contact Ken Colosimo, Lead Auditor, Operations Business Unit at 403-292-4926 or toll-free at 1-800-899-1265.

Yours truly,

Original signed by

Sheri Young
Secretary of the Board

Attachment – Final OPR Audit Report documents

cc: Mr. Al Monaco, President and CEO, Enbridge Inc.

National Energy
Board



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National Energy Board Onshore Pipeline Regulations (OPR)
Final Audit Report of the Enbridge Pipelines Inc. Emergency Management Program

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Enbridge Pipelines Inc. and National Energy Board-Regulated Subsidiaries (Enbridge)
3000 Fifth Avenue Place
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31 March 2015

Canada

Executive Summary

Companies regulated by the National Energy Board (NEB or the Board) must demonstrate a proactive commitment to continual improvement in safety, security and Emergency Management. Pipeline companies under the Board's regulation are required to incorporate adequate, effective and implemented management systems into their day-to-day operations. These systems and associated technical management programs include the tools, technologies and actions needed to ensure NEB regulated pipelines are safe and remain that way over time. In the public interest, the Board holds companies accountable for safety and environmental outcomes.

This report documents the Board's comprehensive audit of Enbridge's management system and Emergency Management program applicable to its facilities that are regulated by the NEB. The audit was conducted using the *National Energy Board Onshore Pipeline Regulations* (OPR) as amended on 21 April 2013. This amendment clarified the Board's expectations for establishing and implementing a documented management system and Emergency Management program. Before issuing the amendment, the Board consulted and communicated with its regulated companies with respect to the new requirements; therefore, an implementation grace period was not given when the OPR was promulgated. As a result, when evaluating compliance, this audit did not consider any extra time Enbridge may have needed to implement changes associated with the formalized management system requirements. As indicated in the amendments, companies must have an effective and well-documented Emergency Management program as a key component of their management system.

The Board conducted the audit following its published audit protocol, which identifies five management system elements. These five elements are broken into 17 sub-elements. Each sub-element reflects several regulatory requirements. Companies must comply with 100 per cent of the regulatory requirements of each sub-element being assessed. If a company's program is found to be deficient with respect to any regulatory requirement, the entire sub-element will be found Non-Compliant. This report also includes an assessment of Enbridge's management system against the requirements of OPR, section 6.1.

The Board's audit of Enbridge's regulated facilities found that Enbridge is in the process of establishing and implementing a management system that reflects its commitment to applying a formal management structure to all of its business functions and departments. Enbridge has not limited its management system to the technical programs required by the Board and was implementing a corporate management system, not merely an operations management system as many companies have done in response to the Board's regulatory requirements.

The Board noted that Enbridge's records indicate that it started developing its management system after the Board's Integrity Management and Safety Management program audits in 2009. This was before Enbridge was notified of the intended OPR changes.

Regardless of when Enbridge started its management system development, its commitment to establishing and implementing a corporate management system for all of its Board regulated business and facilities is a large, complex undertaking. The Board therefore identified that Enbridge's management system is in a transitory state between the program-based management practices it used in the past and its new management system approach. This has contributed to a Non-Compliant finding related to establishing and implementing a compliant management system. It is important to understand that the Board's finding regarding Enbridge's management system primarily reflects the company's stage in developing and applying its management system. It does not necessarily reflect the lack of technical management activities being undertaken to ensure the safety of the pipeline.

The Board's audit of Enbridge's management system included an assessment of the individual management system processes as described in the OPR and the Board's audit protocol. As documented in this report, the Board found that Enbridge has documented many of the required processes within its Integrated Management System. However, the Board found that some of Enbridge's management system processes were not sufficiently systematic, explicit, comprehensive and proactive to meet the OPR requirements.

The Board notes that, regardless of the reasons for non-compliance, companies were required to be compliant with the Board's management system requirements when the Onshore Pipeline Regulations were updated in 2013. Enbridge will need to develop and implement corrective actions to ensure establishment and implementation of its management system.

In addition to evaluating Enbridge's management system and associated processes, the Board's audit also included an evaluation of Enbridge's Emergency Management program to determine the applicability and integration of the management system within it and to assess whether Enbridge is meeting its requirements to develop, implement and maintain an Emergency Management program that anticipates, prevents, manages and mitigates conditions that could adversely affect the environment during the operation and maintenance of its pipeline. The Board found that, notwithstanding the documentation issues relating to its management system processes, the processes and practices presently used by Enbridge identified the majority, and most significant, of its emergency management related hazards and that Enbridge has developed and implemented operational controls and inspection and monitoring programs to address these hazards. The Board notes that Enbridge's Emergency Management program has been in existence for many years, thus its related practices and procedures are well established within the organization. The Board did identify some deficiencies not related to management system process development. All of the Board's findings are documented in Appendix I of this audit report.

In analyzing the results of its audit as a whole, the Board notes that it has made a significant number of Non-Compliant findings. The majority of these findings fall into three general categories:

- Non-compliances relating to management system process development;
- Non-compliances relating to Enbridge's interpretation of OPR requirements; and
- Non-compliances relating to technical content.

The Board notes that the majority of all of the Non-Compliant findings made by the Board relate to management system process development.

The Board has determined that enforcement actions are not immediately required to address the Non-Compliant findings identified in this audit. Within 30 days of the Final Audit Report being issued, Enbridge must develop and submit a Corrective Action Plan for Board approval. The Corrective Action Plan must detail how Enbridge intends to resolve the non-compliances identified by this audit. The Board will assess implementation of the corrective actions to confirm they are completed in a timely manner and applied consistently across Enbridge's regulated system. The Board will also continue to monitor the overall implementation and effectiveness of Enbridge's management system and Emergency Management program through targeted compliance verification activities as part of its ongoing regulatory mandate.

Table of Contents

1.0	Audit Terminology And Definitions.....	6
2.0	Abbreviations.....	10
3.0	Introduction NEB Purpose And Framework.....	11
4.0	Background.....	12
5.0	Audit Objectives And Scope.....	12
6.0	Audit Process And Methodology.....	13
7.0	Audit Activities.....	14
8.0	Management System Evaluation.....	15
9.0	Program Summary.....	18
10.0	Summary Of Audit Findings.....	19
11.0	Conclusions.....	30

Appendices

Appendix I: Audit Evaluation Table

Appendix II: Facility Summaries and Maps

Appendix III: Company Representatives Interviewed

Appendix IV: Documents Reviewed

1.0 Audit Terminology and Definitions

(The Board has applied the following definitions and explanations in measuring the various requirements included in this audit. They follow or incorporate legislated definitions or guidance and practices established by the Board, where available.)

Adequate: The management system, programs or processes complies with the scope, documentation requirements and, where applicable, the stated goals and outcomes of the NEB Act, its associated regulations and referenced standards. Within the Board's regulatory requirements, this is demonstrated through documentation.

Audit: A systematic, documented verification process of objectively obtaining and evaluating evidence to determine whether specified activities, events, conditions management systems or information about these matters conform to audit criteria and legal requirements and communicating the results of the process to the company.

Compliant: A program element meets legal requirements. The company has demonstrated that it has developed and implemented programs, processes and procedures that meet legal requirements.

Corrective Action Plan: A plan that addresses the non-compliances identified in the audit report and explains the methods and actions that will be used to correct them.

Developed: A process or other requirement has been created in the format required and meets the described regulatory requirements.

Effective: A process or other requirement meets its stated goals, objectives, targets and regulated outcomes. Continual improvement is being demonstrated. Within the Board's regulatory requirements, this is primarily demonstrated by records of inspection, measurement, monitoring, investigation, quality assurance, audit and management review processes as outlined in the OPR

Established: A process or other requirement has been developed in the format required. It has been approved and endorsed for use by the appropriate management authority and communicated throughout the organization. All staff and persons working on behalf of the company or others that may require knowledge of the requirement are aware of the process requirements and its application. Staff has been trained on how to use the process or other requirement. The company has demonstrated that the process or other requirement has been implemented on a permanent basis. As a measure of "permanent basis", the Board requires the requirement to be implemented, meeting all of the prescribed requirements, for three months.

Finding: The evaluation or determination of the compliance of programs or elements in meeting the requirements of the *National Energy Board Act* and its associated regulations.



Implemented: A process or other requirement has been approved and endorsed for use by the appropriate management authority. It has been communicated throughout the organization. All staff and persons working on behalf of the company or others that may require knowledge of the requirement are aware of the process requirements and its application. Staff has been trained on how to use the process or other requirement. Staff and others working on behalf of the company have demonstrated use of the process or other requirement. Records and interviews have provided evidence of full implementation of the requirement, as prescribed (i. e. the process or procedures are not partially utilized).

Inventory: A documented compilation of required items. It must be kept in a manner that allows it to be integrated into the management system and management system processes without further definition or analysis.

List: A documented compilation of required items. It must be kept in a manner that allows it to be integrated into the management system and management system processes without further definition or analysis.

Maintained: A process or other requirement has been kept current in the format required and continues to meet regulatory requirements. With documents, the company must demonstrate that it meets the document management requirements in OPR, section 6.5 (1)(o). With records, the company must demonstrate that it meets the records management requirements in OPR, section 6.5 (1)(p).

Management System: The system set out in OPR sections 6.1 to 6.6. It is a systematic approach designed to effectively manage and reduce risk, and promote continual improvement. The system includes the organizational structures, resources, accountabilities, policies, processes and procedures required for the organization to meet its obligations related to safety, security and Emergency Management.

(The Board has applied the following interpretation of the OPR for evaluating compliance of management systems applicable to its regulated facilities.)

As noted above, the NEB management system requirements are set out in OPR sections 6.1 to 6.6. Therefore, in evaluating a company's management system, the Board considers more than the specific requirements of section 6.1. It considers how well the company has developed, incorporated and implemented the policies and goals on which it must base its management system as described in section 6.3; its organizational structure as described in section 6.4; and considers the establishment, implementation, development and/or maintenance of the processes, inventory and list described in section 6.5(1). As stated in sections 6.1(c) and (d), the company's management system and processes must apply and be applied to the programs described in section 55.

Non-Compliant: A program element 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.

Practice: A repeated or customary action that is well understood by the persons authorized to carry it out.

Procedure: A documented series of steps followed in a regular and defined order thereby allowing individual activities to be completed in an effective and safe manner. A procedure also outlines the roles, responsibilities and authorities required for completing each step.

Process: A documented series of actions that take place in an established order and are directed toward a specific result. A process also outlines the roles, responsibilities and authorities involved in the actions. A process may contain a set of procedures, if required.

(The Board has applied the following interpretation of the OPR for evaluating compliance of management system processes applicable to its regulated facilities.)

OPR section 6.5(1) describes the Board's required management system processes. In evaluating a company's management system processes, the Board considers whether each process or requirement: has been established, implemented, developed or maintained as described within each section; whether the process is documented; and whether the process is designed to address the requirements of the process, for example a process for identifying and analyzing all hazards and potential hazards. Processes must contain explicit required actions including roles, responsibilities and authorities for staff establishing, managing and implementing the processes. The Board considers this to constitute a common 5 w's and h approach (who, what, where, when, why and how). The Board recognizes that the OPR processes have multiple requirements; companies may therefore establish and implement multiple processes, as long as they are designed to meet the legal requirements and integrate any processes linkages contemplated by the OPR section. Processes must incorporate or contain linkage to procedures, where required to meet the process requirements.

As the processes constitute part of the management system, the required processes must be developed in a manner that allows them to function as part of the system. The required management system is described in OPR section 6.1. The processes must be designed in a manner that contributes to the company following its policies and goals established and required by section 6.3.

Further, OPR section 6.5(1) indicates that each process must be part of the management system and the programs referred to in OPR section 55. Therefore, to be compliant, the process must also be designed in a manner which considers the specific technical requirements associated with each program and is applied to and meets the process requirements within each program. The Board recognizes that single process may not meet all of the programs; in these cases it is acceptable to establish governance processes as long as they meet the process requirements (as described above) and direct the program processes to be established and implemented in a consistent manner that allows for the management system to function as described in 6.1.

Program: A documented set of processes and procedures designed to regularly accomplish a result. A program outlines how plans, processes and procedures are linked; in other words, how each one contributes to the result. A company regularly plans and evaluates its program to check that the program is achieving the intended results.

(The Board has applied the following interpretation of the OPR for evaluating compliance of programs required by the NEB regulations.)

The program must include details on the activities to be completed including what, by whom, when, and how. The program must also include the resources required to complete the activities.

2.0 Abbreviations

CAP: Corrective Action Plan

CLC: *Canada Labour Code Part II*

CSA Z662-11: CSA Standard Z662 entitled *Oil and Gas Pipeline Systems*, 2011 version

COHSR: Canada Occupational Health and Safety Regulations

Enbridge: Enbridge Pipelines Inc. and its NEB-regulated subsidiaries

EMP: Emergency Management program

GOT: Goals, Objectives and Targets

IMS: Enbridge's Integrated Management System

NEB: National Energy Board

OPR: *National Energy Board Onshore Pipeline Regulations*

3.0 Introduction: NEB Purpose and Framework

The NEB's purpose is to promote safety and security, environmental protection and efficient energy infrastructure and markets in the Canadian public interest within the mandate set by Parliament in the regulation of pipelines, energy development and trade. In order to assure that pipelines are designed, constructed, operated and abandoned in a manner that ensures: the safety and security of the public and the company's employees; safety of the pipeline and property; and protection of the environment, the Board has developed regulations requiring companies to establish and implement documented management systems applicable to specified technical management and protection programs. These management systems and programs must take into consideration all applicable requirements of the NEB Act and its associated regulations. The Board's management system requirements are described within OPR, sections 6.1 through 6.6.

To evaluate compliance with its regulations, the Board audits the management system and programs of regulated companies. The Board requires each regulated company to demonstrate that they have established and implemented, adequate and effective methods for proactively identifying and managing hazards and risks.

As part of the audit, the Board reviews the compliance and incident history of the company as recorded in NEB files. This helps the Board determine the appropriate scope for the audit. During the audit, the Board reviews documentation and samples records provided by the company in its demonstration of compliance and interviews corporate and regionally-based staff.

The Board also conducts separate but linked technical inspections of a representative sample of company facilities. This enables the Board to evaluate the adequacy, effectiveness and implementation of the management system and programs. The Board bases the scope and location of the inspections on the needs of the audit. The inspections follow the Board's standard inspection processes and practices. Although they inform the audit, inspections are considered independent of the audit. If unsafe or non-compliant activities are identified during an inspection, they are actioned as set out by the Board's standard inspection and enforcement practices.

After completing its field activities, the Board develops and issues a Final Audit Report. The Final Audit Report outlines the Board's audit activities, provides evaluations of the company's management system and programs, identifies deficiencies and communicates compliance findings. The audit report follows the format of the Board's published Audit Protocol. Once the Board issues the Final Audit Report, the company must submit and implement a Corrective Action Plan to address all Non-Compliant findings. Final Audit Reports are published on the Board's website. The audit results are integrated into NEB's risk-informed lifecycle approach to compliance assurance.

4.0 Background

Enbridge operates approximately 10,733 km of pipeline in six Canadian provinces and territories. These pipeline facilities include pump stations, tankage and associated operational assets. All of these facilities are within the definition of a “pipeline” as included in the NEB Act. Enbridge also has a considerable amount of non-federally regulated infrastructure in Alberta and across the United States, which complete its North American system. Enbridge’s system allows it to transport liquids from northern and western Canada to end-users in the eastern regions of Canada and the United States. In order for Enbridge to operate its pipelines effectively, it has developed a management structure that reflects its safety and security management, and environmental obligations, as well as its corporate, national, regional and international needs. Enbridge Pipelines Inc. controls and uses several entities that hold NEB-issued certificates for operating in Canada. The entities included within the scope of this audit are identified in Section 5.0, Audit Objectives and Scope of this report.

During audit planning, company staff indicated that Enbridge and its subsidiaries operate the pipelines and facilities using a common management system and technical programs. In order to effectively evaluate compliance of such an expansive system within a reasonable timeframe, the Board chose to conduct individual, comprehensive audits of Enbridge’s required technical programs and management system. This report documents one of six management system and program audits. The audits are titled:

- *Enbridge Integrity Management Program Audit;*
- *Enbridge Safety Management Program Audit;*
- *Enbridge Environmental Protection Program Audit;*
- *Enbridge Emergency Management Program Audit;*
- *Enbridge Third-Party Crossings Program Audit; and*
- *Enbridge Public Awareness Program Audit.*

Audit results confirmed that Enbridge operates its facilities using a common organizational structure to implement a common governance management system that applies to all of its business and operational activities. Some findings are therefore similar in each audit and the individual audit reports reflect this.

5.0 Audit Objectives and Scope

The objective of the audit was to determine the establishment and implementation of Enbridge’s management system and the adequacy and effectiveness of its Emergency Management program. Enbridge was audited against the requirements contained within the following:

- *National Energy Board Act;*
- *National Energy Board Onshore Pipeline Regulations;* and
- Enbridge’s policies, programs, practices and procedures.

This audit was conducted using the *National Energy Board Onshore Pipeline Regulations* (OPR) as amended on 21 April 2013. This amendment clarified the Board's expectations for establishing and implementing a documented management system and Emergency Management program. Before issuing the amendment, the Board consulted and communicated with its regulated companies with respect to the new requirements; therefore, an implementation grace period was not given when the OPR was promulgated. As a result, when evaluating compliance, this audit did not consider any extra time Enbridge may have needed to implement changes.

As noted, Enbridge Pipelines Inc. companies hold a number of certificates to operate in Canada. The Board has included the following companies within the scope of this audit:

- Enbridge Pipeline Inc.;
- Enbridge Pipelines (NW) Inc.;
- Enbridge Pipelines (Westspur) Inc.;
- Enbridge Southern Lights GP Inc. on behalf of Enbridge Southern Lights LP; and
- Enbridge Bakken Pipeline Company Inc. on behalf of Enbridge Bakken Pipeline Limited Partnership.

For more Enbridge facility information, refer to Appendix II of this report.

6.0 Audit Process and Methodology

In undertaking this audit, the Board has applied its standard audit practice following its published protocols. The Board's standard practice and audit activities include:

- Formal notification of the Board's intent to audit by letter;
- Interactive planning processes with the company;
- Information gathering;
- Documentation and record review;
- Program presentations by company personnel and interviews with company personnel;
- Associated inspections and facility reviews;
- Close-out discussions and meetings;
- Developing and Issuing Draft Audit Report to Enbridge
- Developing, finalizing and issuing the Final Audit Report;
- Reviewing and approving any required Corrective Action Plans;
- Reviewing implementation of Corrective Action Plans; and
- Issuing closure letters.

These audit activities allow the company to demonstrate whether its management system and programs comply. They also allow the Board to evaluate the company with respect to: assuring compliance to regulatory requirements; and assuring appropriate safety, security and environmental outcomes as described in OPR, section 6.

As noted, Enbridge Pipelines Inc. operates an expansive liquids pipeline system using a common management system and Emergency Management program. Furthermore, Enbridge divides its Canadian assets into five operational regions: Northern Region, Western Region, Central Region, Southern Prairie Region and Eastern Region. The Board therefore developed its audit plan to evaluate Enbridge's management system and Emergency Management program and to assure that it was appropriate to manage and applied to all of its regulated facilities regardless of location. To this end, the Board conducted interviews, inspections and documentation and record reviews in each region as well as the Edmonton office. It is the Board's expectation that any audit Non-Compliant findings made and corrective actions required by the Board must be applied across all of Enbridge's Board regulated systems and subsidiaries.

7.0 Audit Activities

The Board informed Enbridge Pipelines Inc. of its intent to audit its NEB regulated facilities in a letter dated 19 December 2013. Following the issuance of that letter, Board audit staff met with Enbridge staff on a regular basis to arrange and coordinate this audit. The Board also provided Enbridge with an information guidance document to help Enbridge prepare for the audit, and provide access to documentation and records to demonstrate its compliance. Enbridge established a digital access portal for Board staff to review documentation and records.

On 5 May 2014, an opening meeting was conducted with representatives from Enbridge in Edmonton, Alberta to confirm the Board's audit objectives, scope and process. The opening meeting was followed by Edmonton office interviews from 5 to 16 May 2014, and various field level audit activities as described in the table below. Throughout the audit, Board audit staff gave Enbridge daily summaries with action items, where required.

On 21 and 22 October 2014, the Board held an audit pre-close-out meeting with Enbridge. At this meeting Board staff and Enbridge staff discussed potential deficiencies identified during field activities and discussed additional information that could be of value to the Board prior to compiling its draft audit report. An audit close-out meeting was held on 17 December 2014 to provide Enbridge with a description of the recommendations that staff would be bringing to the Board for decision.

8.0 Management System Evaluation

OPR, section 6.1 outlines the Board's management system requirements as follows:

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;

Emergency Management Program Audit Office and Field Activities
<ul style="list-style-type: none"> • Audit opening meeting (Edmonton, AB) – 5 May 2014 • Edmonton office interviews (Edmonton, AB) – 5-16 May 2014 • Field verification activities: <ul style="list-style-type: none"> • Interviews – Sherwood Park, AB – 26-28 May 2014 • Interviews – Estevan, SK – 9-11 June 2014 • Interviews – Regina, SK – 12 June 2014 • Interviews – Sarnia, ON – 14 July 2014 • Exercise – Estevan, SK – 25 September 2014 • Edmonton office interviews (Edmonton, AB) – 14-17 October 2014 • Audit pre-close-out meeting of information gaps (Edmonton, AB) – 21-22 October 2014 • Audit close-out meeting (Edmonton, AB) – 17 December 2014

(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 assessing Enbridge's management system the Board applied the definitions and guidance as described in Section 1.0 Audit Terminology and Definitions of this report. The Board's audit results indicated that Enbridge was in the process of establishing and implementing a management system that reflects its commitment to applying a formal management structure to all of its regulated business operations. Enbridge has not limited its management system to the technical programs required by the Board. The company appeared to be committed to implementing a corporate management system and not merely an operations management system as many companies do.

Enbridge's records appeared to indicate that it started developing its management system after the Board's Integrity and Safety Management program audits in 2009 and prior to the Board's identification of its intended OPR changes.

Regardless of when Enbridge started its management system development, establishing a corporate management system applicable to all of its business and facilities is a large, complex undertaking. The Board's audit therefore identified that Enbridge's management system was in a transitory state between the program-based management practices it used in the past and its new management system approach.

In determining Enbridge's compliance with respect to establishing and implementing a management system, the Board reviewed the audit results of Enbridge's Emergency Management program processes along with the audit results of other Board program audits completed concurrently. This aided the Board in evaluating Enbridge's systematic practices and deficiencies.

The Board found that Enbridge has not met the requirements for establishing and implementing a management system. For the most part, this reflected the transitory nature of its management system as applied to the Emergency Management program. The issues related to designing and establishing processes as described below and in Appendix 1 also contributed to the Board's Non-Compliant finding. This is especially true with respect to Enbridge's Quality Assurance Program and auditing process design.

The Board notes that it is important to understand that the Board's management system Non-Compliant finding reflects the company's deficiencies in developing and applying its management system. It does not necessarily reflect the lack of technical management activities being undertaken to ensure the protection of the environment.

The Board notes that, regardless of the reasons for non-compliance, companies were required to be compliant with the Board's management system requirements when the OPR were updated in 2013. Enbridge will need to develop and implement corrective actions to ensure establishment and implementation of its management system.

The Board has further detailed its evaluation below in order for Enbridge to understand the nature of the Board's management system finding to aid in development of its Corrective Action Plan.

The Board has found Enbridge Non-Compliant with OPR, section 6.1(a).



This section requires management systems to be systematic, explicit, comprehensive and proactive. Enbridge's documentation that describes its governance management system requirements clearly stated that the company's management system is intended to meet these outcomes. The Board determined that Enbridge's management system did meet the requirements for being systematic, explicit, comprehensive and proactive at an over-arching, system design level. However, as described below, the design of its processes, interpretation of some of the OPR requirements, lack of clarity with respect to some of the specific requirements, such as OPR section 6.3(a) and (b) policies and goals and its definition of risks vs hazards, did not meet the OPR requirements. This resulted in the Board determining that the present management system processes will not ensure that the company's management system is systematic, explicit, comprehensive and proactive throughout all levels of the organization.

The Board found that Enbridge's governance processes for their management system accounted for most of the Board's process requirements by description. However, as described in Appendix I, there were issues associated with many of Enbridge's processes. Enbridge has not designed all of its processes in a way that ensures the OPR process requirements are consistently met at the management system and program level. For example, the Board found that many of the processes did not include clear links to or include tier 2 and 3 procedures where inclusion would ensure appropriate or consistent implementation of the processes at the program level. This has led to some of the company's processes being comprised of commitment statements rather than activity descriptions. Additionally, many of the company's documented processes lacked full descriptions of the input and output processes and the products associated with each process. The Board found that Enbridge generally mitigated these process design deficiencies from an emergency management perspective; however, this was accomplished by program-level management practices and procedures. As well, Board documentation and record reviews and interviews with staff responsible for developing processes or programs indicated that many of the missing process components were actually being done by practice but have not been documented in Enbridge's management system processes.

As part of Enbridge's Corrective Action Plan to address its management system Non-Compliant finding, the Board is of the view that, Enbridge must develop and implement a compliant document control processes that meet OPR requirements for all new and existing documents in the company's management system. This will serve to assure that the management system processes are designed appropriately and that existing or referenced documents fully meet the OPR requirements.

In reviewing Non-Compliant findings across the programs being audited concurrently by the Board, it is noted that several of the Non-Compliant findings related to Enbridge's interpretation of OPR requirements. Enbridge provided specific information with respect to these interpretations during the audit. The Board noted that all regulations are subject to interpretation. However, many of Enbridge's interpretations in this category did not reflect the wording of the regulations or standard management system practices. Examples of Enbridge's interpretation issues can be found in the Board's evaluation of the company's quality assurance program, auditing, hazard identification and management of change processes, all of which are outlined in Appendix I of this document.

During its audit, the Board noted that Enbridge colour coded some process steps red in its governance process diagrams. According to the legend provided, red indicated that the process step should be considered aspirational. When interviewed, Enbridge staff indicated that aspirational refers to steps considered above regulatory requirements. The Board has given Enbridge and its regulated industry consistent information with respect to aspirational management practices. If a company identifies a practice as “above regulatory requirements, aspirational or stretch”, the Board will not hold that company accountable for implementing the practice as per OPR, section 4. This is to allow and encourage companies to include aspirational goals or practices in their overall management practices without fear of non-compliance when aspirational goals are not met. The Board found that some of the process steps Enbridge identified as aspirational were actually legally required. Examples of this included steps for identifying and verifying competencies in Enbridge’s IMS 01, 4.14 Workforce Competency and Qualification Process.

All of the comments above contribute to the Board’s Non-Compliant finding with respect to OPR section 6.1(a).

Based on the information from Enbridge and interviews with its staff, the Board’s audit did not identify any non-compliant issues related to OPR, sections 6.1(b) through (e).

Based on the Board’s evaluation of Enbridge’s management system against the OPR requirements, the Board has determined that Enbridge is Non-Compliant with section 6.1. Enbridge will have to develop a Corrective Action Plan to address the described deficiencies.

9.0 Program Summary

NEB-regulated companies must demonstrate a proactive commitment to continual improvement in safety, security, and environmental protection. Pipeline companies under the Board’s regulation are required to incorporate Emergency Management programs into their day-to-day operations. These programs must ensure that pipelines are operated in a manner that protects the environment.

During the audit Enbridge indicated that the Board’s required emergency management program requirements correspond to the company’s Emergency and Security Management System. The Board identified that Enbridge’s Emergency and Security Management System (IMS-07) is one of 19 management systems included in Enbridge’s Integrated Management System (IMS). Further review of Enbridge’s IMS indicated that it is actually comprised of 17 subordinate management systems, governed by two governance management systems, IMS-01, Governing Policies and Processes Management System and IMS-02, Compliance and Ethics Management System. These governance management systems outline minimum corporate requirements to be incorporated into each sub-ordinate management system of which IMS-07 is one. As noted previously in section 8.0 of this report, at the time of the audit the Board found that Enbridge had not established and implemented its required management system.

The Board has identified that primary responsibility for Enbridge's Emergency Management program resides within its Emergency and Security department. This department is comprised of subject matter experts who are responsible for providing emergency and security leadership, promotion and direction in organizational activities through management system development and maintenance, stewardship, technical knowledge and support for Enbridge employees and contractors.

The Board identified that responsibility for implementation of the Emergency Management program resides with a number Enbridge's functional departments. The Board therefore considered the sum of the Emergency and Security department and all other departments' emergency management related responsibilities as comprising the Emergency Management program for the purposes of this audit.

Due to the transitory nature of Enbridge's corporate management system, the Board found that Enbridge's Emergency Management program framework was comprised of a mix of IMS processes and historically established and implemented processes and practices. It was noted during the audit that this transition has created gaps in continuity and consistency.

The Board found that the processes presently used by Enbridge identified the majority, and most significant, of its hazards and that Enbridge has developed and implemented the operational controls and inspection and monitoring programs to address these hazards. The Board also found that Enbridge's Emergency Management program has been in existence for many years, thus the emergency related practices and procedures are well established within the organization. Notwithstanding these practices and procedures, the audit identified several non-compliant findings. The majority of the findings fall into three general categories:

- Non-compliances relating to management system process development;
- Non-compliances relating to Enbridge's interpretation of OPR requirements; and
- Non-compliances relating to technical content.

The Board has determined that no enforcement actions are immediately required to address the Non-Compliant findings identified in this audit. Within 30 days of the Final Audit Report being issued, Enbridge must develop and submit a Corrective Action Plan for Board approval detailing how it intends to resolve Non-Compliances identified by this audit. The Board will assess the implementation of the corrective actions to confirm that they are completed in an expedient manner, and on a system-wide basis. The Board will also continue to monitor the overall implementation and effectiveness of Enbridge's management system and Emergency Management program through targeted compliance verification activities as a part of its on-going regulatory mandate.

10.0 Summary of Audit Findings

The Board conducted the audit following its published Audit Protocol, which identifies five Management System elements. These five elements are broken into 17 sub-elements. Each

sub-element reflects several regulatory requirements. Companies must comply with 100 per cent of the regulatory requirements of each sub-element being assessed. If a company's program is deficient in any regulatory requirement, the entire sub-element will be found non-compliant. The company will have to develop a corrective action plan to demonstrate to the Board that appropriate actions will be taken to achieve full compliance.

The following summary is a high-level overview of the Board's audit findings for Enbridge's Emergency Management program based on information provided by Enbridge during the audit.

Details of how each of the audited elements impacts the Emergency Management program and a full description of the Board's assessment for each of its Management System sub-elements can be found in Appendix I of this report.

Element 1.0 – Policy and Commitment

Sub-element 1.1 – Leadership and Accountability

This sub-element of the audit requirements states that the company must appoint an Accountable Officer and notify the Board of the appointment.

Enbridge had submitted a written notice to the NEB indicating that it had appointed an Accountable Officer. In its submission, Enbridge confirmed that its Accountable Officer had authority over the human and financial resources required to meet the Board's substantive expectations.

Based on the information provided by Enbridge, the Board has not identified any non-compliance issues. The Board has therefore assessed this sub-element as Compliant.

Sub-element 1.2 – Policy and Commitment Statements

This sub-element of the audit requirements states that the company must have documented policies and goals to ensure the safety and security of the public, workers, and the pipeline and ensure protection of property and the environment. Further, as these policies and goals are to be used to establish and implement the management and programs, the Board requires that the policies and goals be explicit from the perspective of design, content and communication.

The Board found that Enbridge had corporate and program level policies and goals that related to the Emergency Management program.

Notwithstanding the many policies, processes, principles, programs and initiatives that Enbridge had developed to direct and support its Emergency Management program, the Board identified non-compliance in the Policy and Commitment Statements sub-element.

Enbridge did not demonstrate that it had a policy that explicitly describes internal reporting of hazards, potential hazards, incidents and near misses and describes the conditions under which a person making a report will be granted immunity from disciplinary action.

Based on the Board's evaluation of Enbridge's management system and the Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Element 2.0 – Planning

Sub-element 2.1 – Hazard Identification, Risk Assessment and Control

This sub-element of the audit requirements states that the company must have an established, implemented and effective process for identifying and analyzing all hazards and potential hazards, assessing the degree of risk associated with the hazards, and implementing control measures to minimize or eliminate risk.

The Board found that Enbridge had developed a governance management system process for identifying, evaluating and managing its hazards and risks; however, the Board also found that this governance level management system process did not meet the OPR requirements.

The Board found that, at the program level, Enbridge's hazard identification practices were considered to be simplistic and did not reflect common hazard identification practices. Enbridge's identification of a singular hazard approach combined with its corporately focused and undemonstrated risk evaluation practices is considered to be a foundational issue with respect to developing a management system driven emergency management program. The Board has found that Enbridge has not developed the OPR required sequential stepped-approach of hazard and potential hazard identification, evaluation of risk and determination of controls.

The Board found that Enbridge had not developed a program level risk evaluation process that addressed the OPR requirements. During the audit Enbridge provided two documented processes as its Emergency Management program level risk evaluation processes. The Board found that the processes, alone or together, did not meet the OPR requirements as one focused on corporate risk and the other was applicable only to specific activities.

The Board found that Enbridge had not established and implemented a documented management system process to develop and implement controls to prevent, manage and mitigate its identified hazards and risks as part of its Emergency Management program.

Regardless of the lack of a compliant process for developing controls, the Board found that Enbridge had established and implemented emergency management related controls and control practices such as the development of emergency response plans, tactical plans, pre-identification of control points and acquisition and placement of emergency response. The Board found that the controls had been developed based on standard industry practices, input from its and other emergency response personnel and knowledge gathered during its exercise activities and past responses.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Sub-element 2.2 – Legal Requirements

This sub-element of the audit requirements states that the company must have an established, implemented and effective process for identifying and monitoring compliance with all legal requirements applicable to the company. The company must also maintain a list of the legal requirements that apply to it.

The Board found that Enbridge had developed management system and program level processes for identifying and monitoring its legal requirements. The management system level process included requirements for development of compliance registers at both levels. The Board found that Enbridge's management system level processes and compliance registers did not meet the OPR requirements with respect to design and content.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Sub-element 2.3 - Goals, Objectives and Targets

This sub-element of the audit requirements states that the company must have an established, implemented and effective process for developing and setting goals, objectives and specific targets for the risks and hazards associated with the company's facilities and activities.

The Board found that, at both the management system and program levels, Enbridge had established and implemented a process that meets the Board's requirements for establishing goals, objectives, targets and performance measures.

The Board also found that, although Enbridge had established and implemented a process for developing and setting, goals, objectives and targets, Enbridge did not demonstrate that it had established explicit goals related to its OPR section 6 obligations for it to base its management system and Emergency Management program on and as required by OPR, section 6.3.

Based on the Board's evaluation of Enbridge's management System and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Sub-element 2.4 – Organizational Structure, Roles and Responsibilities

This sub-element of the audit requirements states that the company must have a documented organizational structure that enables it to meet the requirements of its management system. The company must also complete an annual documented evaluation to demonstrate that there is adequate human resourcing to meet these obligations.

The Board found that Enbridge had a documented organizational structure and communicates the roles responsibilities and authorities of the officers and employees at all levels of the company. Additionally, the Board found that Enbridge had adopted ICS that establishes a proven incident response organizational structure with documented roles and responsibilities.

The Board found that Enbridge had established and implemented several mechanisms for reviewing its emergency management program human resourcing needs. The Board, however, found deficiencies with Enbridge's developed evaluation of need practices. Specifically, the Board also found that Enbridge's evaluation of need practices did not specifically account for staff with emergency management responsibilities outside of the Emergency and Security department. Further, Enbridge did not demonstrate that it had documented an evaluation of the human resource needs required during an actual response.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Element 3.0 – Implementation

Sub-element 3.1 – Operational Control-Normal Operations

The Board notes that the Emergency Management program addresses only abnormal or upset operations. This section is therefore considered not to apply in this audit. The review of Enbridge's controls is documented in sub-element 3.2, below.

Sub-element 3.2 - Operational Control-Upset or Abnormal Operating Conditions

This sub-element of the audit requirements states the company shall establish and maintain plans and procedures to identify the potential for upset or abnormal operating conditions, accidental releases, incidents and emergency situations. The company shall also define proposed responses to these events and prevent and mitigate the likely consequence and/or impacts of these events.

Based on interviews, and document and record reviews, the Board found that Enbridge demonstrated that it had numerous controls for its emergency program such as emergency response plans, tactical plans, tank fire plans etc. The Board found that Enbridge had developed its controls (plans, equipment etc.) based on industry practices, input from emergency response personnel expertise and experience with historical events. Further, the Board found that Enbridge has demonstrated that it had dedicated significant resources to acquiring equipment for emergency response and had also established agreements with response specialists and other industry organizations for emergency response preparedness and response activities.

The Board found that Enbridge developed controls that, based on the Board's assessment, correspond to its hazards, risks, activities and locations.

The Board reviewed Enbridge's Emergency Procedures manuals, as submitted to the Board, and has found deficiencies that Enbridge has agreed to rectify by 31 January 2015.

The Board has found that Enbridge has not utilized a sequential stepped approach for hazard and potential hazard identification, evaluation of risk and determination of controls. The Board further found that, in the absence of a compliant controls development and associated hazard and risk identification and evaluation processes, Enbridge could not formally demonstrate or verify that its existing controls were adequate or, in the case of equipment and associated human resources, located in appropriate locations.

The Board found that Enbridge had established and implemented ICS (Incident Command Structure) as its standard process for coordinating, controlling and managing the response activities of employees and other people working with or on behalf of the company during an incident.

Based on the Board's evaluation of Enbridge's management system and the Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Sub-element 3.3 - Management of Change

This sub-element of the audit requirements states that the company must have an established, implemented and effective process for identifying and managing any change that could affect safety, security or protection of the environment.



The Board found that Enbridge was in the process of establishing an updated management system management of change process. The Board found that this process did not meet the OPR requirements with respect to design, content.

The Board found that, at the program level, Enbridge had implemented a number of practices for management of change applicable to its Emergency Management program. The Board found that these practices did not meet all of the OPR requirements with respect to applicability and design.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Sub-element 3.4 - Training, Competence and Evaluation

This sub-element of the audit requirements states that the company must have an established, implemented and effective process for developing competency requirements and training programs for its employees and contractors. These competency requirements and training programs must enable employees and contractors to perform their duties in a manner that is safe, ensures the security of the pipeline, and protects the environment.

The Board found that Enbridge had established and implemented a training program for its employees and contractors. The Board also found that, while Enbridge had implemented some practices for reviewing the competencies of its workers, it had not established and implemented processes consistent with the requirements of OPR.

The Board notes that it brought this deficiency to Enbridge's attention early in its audit process as a matter requiring urgent attention. Enbridge responded by developing a documented process that it provided to the Board's auditors prior to the close-out of the field activities. Due to the early stage of development and implementation, Enbridge could not demonstrate the adequacy, effectiveness, establishment and implementation of the new process.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Sub-element 3.5 - Communication

This sub-element of the audit requirements states that the company must have an established, implemented and effective process for internally and externally communicating safety, security and Emergency Management information.

The Board found that Enbridge communicated internally and externally with respect to its emergency management program throughout its organization as a matter of practice.

The Board found that Enbridge had established a number of formal practices and methodologies to communicate and manage its communication during an emergency.

The Board also found that Enbridge had not established or implemented a communication process that meets the Board's management system process requirements. Additionally, the Board found deficiencies relating to Enbridge's Continuing Education and Liaison requirements.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Sub-element 3.6 – Documentation and Document Control

This sub-element of the audit requirements states that the company must have an established, implemented and effective process for identifying and managing the documents required to meet the company's obligations for conducting activities in a manner that ensures the safety and security of the public, company employees and the pipeline, and that protects property and the environment.

The Board found that, at the program level, Enbridge demonstrated that it had developed document control lists and procedures and practices for managing and controlling its Emergency Management program documents that address many of the OPR requirements.

The Board also found that, at the governance level, Enbridge had developed its new IMS-01, section 4.9 *Governance Document Control Process*, dated 22 August 2014. However, Enbridge did not demonstrate that this process met the OPR requirements or had been established and implemented

The Board also found that Enbridge did not demonstrate that it had implemented a process for identifying the documents required for the company to meet its obligations under section 6 and as required by OPR, section 6.5(1)(n).

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Element 4.0 – Checking and Corrective Action

Sub-element 4.1 – Inspection, Measurement and Monitoring

This sub-element of the audit requirements states that the company must establish and implement an effective process for inspecting and monitoring its activities and facilities. This is so that the company can evaluate the adequacy and effectiveness of the protection programs and take corrective and preventive actions if deficiencies are identified.

The audit sub-element also requires the company to have an effective process for:

- Evaluating the adequacy and effectiveness of the company's management system;
- Monitoring, measuring and documenting the company's performance in meeting its obligations; and
- Using an effective data management system to monitor and analyze the trends in hazards, incidents and near-misses.

The Board found that, at the program level, Enbridge's Emergency Management department had processes for inspecting, monitoring and testing its emergency management program components. However, the Board found that Enbridge could not demonstrate that it had established and implemented governance management system processes that meet the requirements of the OPR.

As part of its review of this sub-element the Board conducted an evaluation of Enbridge's management system and program level processes for taking corrective and preventive actions. The Board found that Enbridge had not established and implemented a management system process for taking corrective and preventive actions at both the management system and program levels that meets the OPR requirements. The Board notes that the requirement to have a process to take corrective and preventive action is included in many of the sub-elements within the Board's audit protocol and the OPR. The Board therefore requires the corrective action plan developed to address the deficiencies identified for this sub-element to explicitly include all sub-element and OPR requirements, where corrective and preventive actions are referenced.

The Board found that Enbridge had established and implemented an emergency management exercise program to test and monitor its emergency response planning and capabilities.

The Board found that Enbridge has established and implemented a data management system that meets the Board's requirements and provides a program level process to ensure that any corrective and preventive actions resulting from its emergency management testing and monitoring processes are appropriately managed.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Sub-element 4.2 - Investigating and Reporting Incidents and Near-Misses

This sub-element of the audit requirements states that the company must establish and implement an effective process for reporting hazards, potential hazards, incidents and near-misses, and for taking corrective and preventive actions to address them. This includes investigating if the hazards, potential hazards, incidents and near-misses have or could have resulted in the safety and security of the public, employees and the pipeline, and protection of property and the environment. This sub-element also requires a company to have an established, maintained and

effective data management system for monitoring and analyzing the trends in hazards, incidents and near-misses.

The Board found that Enbridge had developed and implemented the processes and procedures at the program level for documenting and investigating events that meet the OPR requirement.

The Board also found that, at the governance level, Enbridge's IMS-01, section 4.10 Event Investigation Processes, dated 11-December 2013 had been documented and included in its Governing Policies and Processes Management System manual and that key activities were being implemented within its programs. These processes were, however, identified as "In Progress" and therefore not established and implemented.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Sub-element 4.3 - Internal Audit

This sub-element of the audit requirements states that a company must establish and implement an effective quality assurance program for its management system and for each protection program, including a process for conducting regular inspections and audits and for taking corrective and preventive actions if deficiencies are identified.

The Board found that Enbridge was undertaking many of the activities that are normally associated with quality assurance program. However, the Board found, however, that Enbridge had not organized the quality assurance activities within a program as required by the OPR.

The Board found that Enbridge had undertaken a number of audit related activities including an audit that meets the requirements of section 55 of the OPR. The Board also found that Enbridge had not undertaken an audit consistent with section 53 of the OPR. The Board noted that Enbridge had already developed a Board approved corrective action plan for this issue as part of its section 55 audit activities. The corrective action is scheduled to be completed by 31 December 2016.

With respect to developing a process for conducting audits as required by OPR section 53, Enbridge indicated that it utilized a combination of a number of different methods to meet these requirements. Upon reviewing the overall and individual processes and practices the Board found that they do not meet the OPR requirements by design and practice.

As part of its review of this sub-element the Board conducted an evaluation of Enbridge's management system and program level processes for taking corrective and preventive actions. The Board found that Enbridge had not established and implemented a management system process for taking corrective and preventive actions at both the management system and program levels that meets the OPR requirements. The Board notes that the requirement to have a process to take corrective and preventive action is included in many of the sub-elements within the

Board's audit protocol and the OPR. The Board therefore requires the corrective action plan developed to address the deficiencies identified for this sub-element to explicitly include all sub-element and OPR requirements, where corrective and preventive actions are referenced.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Sub-element 4.4 – Records Management

This sub-element states that a company must establish and implement an effective process for generating, retaining, and maintaining records that document the implementation of the management system and its protection programs.

The Board found that Enbridge had developed a draft governance Records Management Process as part of its Integrated Management System. The Board also found that, due to the draft nature of the process, Enbridge did not demonstrate that it had established and implemented a management system process that meets the OPR requirements.

The Board also found that, regardless of the establishment of its management system process, Enbridge had implemented a consistent records management practice for application across its organization. At the Emergency Management program level the Board found record management process deficiencies with respect to the design and implementation in some of the document and records reviewed.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Element 5.0 – Management Review

Sub-element 5.1 - Management Review

This sub-element states that a company must establish and implement an effective process for conducting an annual management review of the management system and each protection program and for ensuring continual improvement in meeting the company's obligations. This sub-element also requires a company to complete an annual report for the previous calendar year, signed by the accountable officer, describing the performance of the company's management system in meeting its obligations.

The Board found that Enbridge had established and implemented processes to address the stated requirements and had undertaken the activities associated with its processes. The Board also found, however, that Enbridge's processes did not fully meet all of the OPR requirements. As a result the management reviews completed by Enbridge were also found to be non-compliant.

Additionally, the Board found that some of the Non-Compliant findings made in this audit fall within the responsibility and accountability of Enbridge's senior management. These relate to direction, management and oversight and, as such, have contributed to the Non-compliant finding for this element.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

11.0 Conclusions

Companies regulated by the NEB must demonstrate a proactive commitment to continual improvement in safety, security and environmental protection. Pipeline companies under the Board's regulation must establish and implement effective management systems and incorporate Emergency Management programs into their day-to-day operations. These programs must ensure that pipelines are operated in a manner that protects the environment.

During this audit Enbridge was required to demonstrate the adequacy and effectiveness of its management system and Emergency Management program to the Board. The Board reviewed documentation and records provided by Enbridge, conducted inspections and interviewed Enbridge staff.

Based on its review, the Board found that Enbridge was in a transitory period in terms of establishing and implementing its management system. Additionally, the Board's audit found that some of Enbridge's management system processes were not designed or established and implemented in a manner that allowed its management system to meet the requirements of OPR section 6.1. Consequently, the Board has found that Enbridge's management system is Non-Compliant.

The Board has found that Enbridge's Emergency Management program reflected the transitory nature of Enbridge's management system and process issues as noted. The Board's audit found, however, and most importantly, that, regardless of the design and implementation status of its management system, Enbridge's Emergency Management program and the processes and practices being used, identified and controlled the majority and most significant of the company's emergency management related hazards and risks.

In analyzing Enbridge's Non-Compliant findings the Board has found that most of them fall into three general categories:

- Non-compliances relating to management system process development;
- Non-compliances relating to Enbridge's interpretation of OPR requirements; and
- Non-compliances relating to technical content



The Board notes that the majority of all of the Non-Compliant findings made by the Board relate to management system process development.

The Board has determined that while no enforcement actions are immediately required to address these non-compliant findings, as per the Board's standard audit practice, Enbridge must develop and submit a corrective action plan describing its proposed methods to resolve the non-compliances identified and the timeline in which corrective actions will be completed. Enbridge will be required to submit its corrective action plan for approval within 30 days of the final Audit Report being issued by the Board.

The Board will assess the implementation of all of Enbridge's corrective actions to confirm they are completed in a timely manner and on a system wide basis until they are fully implemented. The Board will also continue to monitor the overall implementation and effectiveness of Enbridge's Emergency Management program and management system as a whole through targeted compliance verification activities as a part of its ongoing regulatory mandate.

The Board will make its final Audit Report and Enbridge's approved corrective action plan public on the Board's website.

APPENDIX I:

EMERGENCY MANAGEMENT PROGRAM AUDIT EVALUATION TABLE¹

1.0 POLICY AND COMMITMENT
<p>1.1 Leadership Accountability</p> <p>Expectations: -The company shall have an accountable officer appointed who has the appropriate authority over the company's human and financial resources required to establish, implement and maintain its management system and protection programs, and to ensure that the company meets its obligations for safety, security and protection of the environment. The company shall have notified the Audit Team of the identity of the accountable officer within 30 days of the appointment and ensure that the accountable officer submits a signed statement to the Audit Team accepting the responsibilities of their position.</p>
<p>References: OPR section 6.2</p>
<p>Assessment:</p> <p><u>Accountable Officer</u></p> <p>The Board requires the company to establish, implement and maintain an accountable officer. The accountable officer must be given appropriate authority over the company's human and financial resources for ensuring that the company meets its obligations for safety, security and protection of the environment.</p> <p>On 31 March 2014, Enbridge submitted written notice to the Board indicating that its President, Guy Jarvis, had been appointed as the accountable officer for Enbridge Pipelines Inc. and all of its subsidiaries regulated by the Board. In its submission, Enbridge confirmed that its accountable officer has the authority over the human and financial resources required to meet the Board's substantive expectations.</p> <p>Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has not found any issues of Non-Compliance. The Board has determined that Enbridge is Compliant with this sub-element.</p>
<p>Compliance Status: Compliant</p>

1.2 Policy and Commitment Statements

Expectations: The company shall have documented policies and goals intended to ensure activities are conducted in a manner that ensures the safety and security of the public, workers, the pipeline, and protection of property and the environment. The company shall base its management system and protection programs on those policies and goals. The company shall include goals for the prevention of ruptures, liquids and gas releases, fatalities and injuries and for the response to incidents and emergency situations.

The company shall have a policy for the internal reporting of hazards, potential hazards, incidents and near-misses that includes the conditions under which a person who makes a report will be granted immunity from disciplinary action.

The company's accountable officer shall prepare a policy statement that sets out the company's commitment to these policies and goals and shall communicate that statement to the company's employees.

References: OPR section 6.3

Assessment:

Governance Level Policies and Goals and Commitment Statement

The Board requires the company to document its policies and goals for ensuring its activities are conducted in a manner that ensures the safety and security of the public, workers and pipeline, and the protection of property and the environment.

The NEB OPR does not include any specific management system process requirements for developing policies and goals. However, Enbridge has established clear management system guidance with respect to its process for developing policies and goals. At a governance level, Enbridge's IMS-01, *Governance Documentation* outlines the company's expectations for documenting key corporate policies, such as the *Strategic and Business Planning Processes*. The *Governance Documentation* also explains the company's "Planning Cascade" and associated documentation. This Planning Cascade document explains how the company links its policies and corporate vision to its performance targets and metrics. The practices described within the *Governance Documentation* process align with the Board's requirements for establishing policies, goals, objectives, targets and performance measures. While not an absolute alignment between the Board's requirements and Enbridge's internal processes it does reflect integration of the Board's requirements into Enbridge's business management practices.

(Note: While “goals” are included in this sub-element’s description, for clarity and organization, the review of goals is documented in sub-element 2.3 Goals, Objectives, Targets, below)

Governance Policy

Enbridge’s IMS-01, section 4.2.1, *Strategy and Objectives Development Process* describes the company’s process for establishing objectives, setting targets, and maintaining a dashboard of scorecard metrics. The executive management team uses the *Strategy and Objectives Development Process* to direct department priorities and activities. Section 4.3.2, *Scorecard* and section 4.3.4, *Dashboard Reporting Process* define the departmental processes for monitoring and measuring its performance against the Liquids Pipelines Business Plan and Enbridge targets.

Governance Commitment Statement

With respect to the OPR requirements relating to developing “a policy statement that sets out the company’s commitment to these policies and goals and shall communicate that statement to the company’s employees”, the Board identified that Enbridge’s IMS-01 included a compliant statement signed by the company’s Accountable Officer. The Board noted that this statement had not been updated in the documents it received at the time of the audit. The Board notes, however, that the documents were provided to the Board before the company notified the Board of its new Accountable Officer. Therefore, the Board will not be making a Non-Compliant finding based on this lack of endorsement.

(Note: During its audit the Board noted that Enbridge’s Management and Protection Programs are directed by its Governance Management System Processes; therefore, a full review of the Governance Processes and their application at the “program” level follows.)

Emergency Management Program Policy and Commitment Review

Emergency Management Policy

During the audit Enbridge indicated that its emergency management program was integrated into Enbridge’s formal Integrated Management System (IMS). In order to conform to this system and its governance requirements, Enbridge had developed its Emergency and Security Management System (IMS-07) and associated documentation. In this documentation Enbridge indicated that the Emergency and Security Management System is guided by the governing Policies set out in IMS-01. (IMS-01 is Enbridge’s governance management system to which all sub-ordinate (program level) management systems must conform.) The Board’s review of the policies found within IMS-01 indicated that, while they provided higher level

direction for Enbridge’s Liquid Pipelines and Major Projects to meet business requirements, they did not provide explicit policy to base its management system on as described in section 6.3 of the OPR. Review of other documentation provided did not demonstrate these requirements. Enbridge had established “Emergency and Security Management Principles” that contained a number of principles that correspond to content that would be included in many standard emergency management policies. Documentation supplied by Enbridge, however, specifically indicated that its principles directly align with and should be reviewed as complying with the Board’s program “Goal” requirements. The Board reviewed a number of other policies and management system documents that contained implicit references to developing, maintaining or implementing incident response capabilities; however, none of the documents met the OPR requirements. The Board therefore found that Enbridge had not demonstrated explicit compliance with the OPR.

Hazard Reporting and Immunity from Disciplinary Action Policies

The OPR contains specific policy requirements with respect to internal reporting of hazards, potential hazards, incidents and near-misses that includes the conditions under which a person who makes a report will be granted immunity from disciplinary action. The Board expects this policy to be explicit in its design and communication and be easily visible to all staff.

In its demonstration of compliance with these OPR requirements, the Board was provided a number of internal documents that describe Enbridge’s expectations with respect to the required policy. The documents provided included its IMS-01: *Governing Policies and Processes*, its IMS-02: *Compliance and Ethics Management System*, its Compliance Policy, its Statement of Business Conduct and numerous Tier 2 and 3 documents. The Board reviewed the documents and noted the following:

Enbridge’s IMS-01, *Governing Policies and Processes Management System* was released on 1 January 2014. This document is the foundation for Enbridge’s corporate and program management systems development and management. The *Compliance Assurance* section in IMS-01 states that “management will provide an open and confidential method for the Workforce to report Non-Compliant, unethical or unlawful behaviour, without fear of retaliation.”

Section 1.4.3 of IMS-02 *Compliance and Ethics Management System*, states that “The Enbridge Workforce will report to their supervisor situations and acts they suspect could reveal or lead to an Event affecting Enbridge. No retaliatory action will be taken against any Workforce member raising Events in good faith. Raising Events will be held confidential, in accordance with legal requirements.” Further, IMS-02, section 1.5 states that “Events will be reported without fear of retaliation to ensure Corrective and Preventive Action.”

Enbridge has posted the *Compliance Policy* for its Liquids Pipeline division on its e-link intranet site. This policy says that employees are accountable to “*comply with all applicable laws, regulations and other legal requirements.*” According to this policy, employees are expected to “*immediately report any new or suspected material compliance issue to their leader.*” The policy also says that “*in reporting any new or suspected compliance issues all employees will be treated in accordance with Enbridge’s non-retaliation principles set out in Enbridge’s Statement on Business Conduct.*”

The *Statement of Business Conduct* applies to all employees and contract staff in the Enbridge group of companies. The statement includes Enbridge’s non-retaliation policy. It includes the assertion that “*no retaliatory action will be taken against an employee or contractor for providing good faith information either internally or to a government authority, or for participating in any proceeding concerning alleged violations of any laws or policies. Disciplinary measures may be taken against an employee or contractor if they participated in the activity, even if they reported it.*”

Review of the supplied information identified that the Enbridge policies did not explicitly include reporting of hazards and potential hazards. The policies also did not explicitly identify the conditions under which a person who makes such a report will be granted immunity as part of the reporting policy. Further, Enbridge limited its non-reprisal statements to issues relating to compliance or unethical behavior. The Board notes that the policies are intended to be explicit with respect to reporting and what to report in order to, not only encourage reporting but also to clearly identify what to report. Enbridge’s statements would require interpretation prior to reporting thus potentially slowing down hazard management and mitigation. Also, as hazards and potential hazards are not necessarily violations of law or the result of unethical behaviour, the Board has determined that the policies or statements provided did not meet the OPR requirements. Further, the Board finds that Enbridge did not communicate the policy requirements in a manner acceptable to the Board. The Board found that many parts of the requirements were located in intranet documentation or in Tier 2 and 3 documents. The Board considers that the required policy should be part of the corporate policy and be communicated explicitly as such.

Summary

The Board found that Enbridge has developed principles and programs to guide and support its Emergency Management program.

The Board also found the following areas of non-compliance in the Policy and Commitment Statements sub-element:

- Enbridge did not demonstrate that it has a policy that explicitly describes internal reporting of hazards, potential hazards, incidents and near-misses as required by OPR, section 6.3(1)(a);
- Enbridge did not demonstrate that its policies include the conditions under which a person who reports a hazard, potential hazard, incident or near-miss will be granted immunity from disciplinary action as required by OPR, section 6.3(1)(a); and
- Enbridge did not demonstrate that it has a management system policy for its Emergency Management program that meets the requirements of OPR, section 6.3(2).

Based on the Board's evaluation of Enbridge's management system and the Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Compliance Status: Non-Compliant

2.0 PLANNING

2.1 Hazard Identification, Risk Assessment and Control¹

Expectations: The company shall have an established, implemented and effective process for identifying and analyzing all hazards and potential hazards. The company shall establish and maintain an inventory of hazards and potential hazards. The company shall have an established, implemented and effective process for evaluating the risks associated with these hazards, including the risks related to normal and abnormal operating conditions. As part of its formal risk assessment, a company shall keep records to demonstrate the implementation of the hazard identification and risk assessment processes.

The company shall have an established, implemented and effective 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. The company shall have and maintain a data management system for monitoring and analyzing the trends in hazards, incidents, and near-misses.

The company shall have an established, implemented and effective process for developing and implementing controls to prevent, manage and mitigate the identified hazards and risks. The company shall communicate those controls to anyone exposed to the risks.

References: OPR section 6.5(1)(c)(d)(e)(f)(r)(s)

Assessment:

Governance Level Hazards and Potential Hazards Identification

At a governance level, Enbridge's IMS-01, section 4.3, *Risk Management Process* describes the company's process for identifying hazards, assessing risks and developing and implementing controls. The process includes written descriptions and the steps required for identifying hazards, assessing risks, planning risk responses, monitoring, reviewing and reporting risks. At a high level, the risk management steps identified in Enbridge's *Risk Management Process* correspond to the legal requirements of this sub-element. However, in its review of this process, the Board noted deficiencies in the design and implementation of this process.

Enbridge's *Risk Management Process* outlines broad, inter-related requirements and commitments; however, it does not meet the Board's process requirements as outlined in Section 1.0 Audit Terminology and Definitions of the Board's attached Audit Report.

¹ Hazard: Source or situation with a potential for harm in terms of injury, ill health, damage to property, damage to workplace and environment, or a combination of these. Risk: Combination of the likelihood and consequence(s) of a specified hazardous event occurring.

Governance: Hazard vs Risk

In the governance *Risk Management Process* and related practices, Enbridge uses the terms “risk” and “hazard” interchangeably; this is inconsistent with the Canada Labour Code and the OPR and common practice definition or use of the terms. The Board has provided the following definition of hazard and risk in the past. Hazard: Source or situation with a potential for harm in terms of injury, ill health, damage to property, damage to workplace and environment, or a combination of these. Risk: Combination of the likelihood and consequence(s) of a specified hazardous event occurring.

Although the Board reviewed Enbridge’s program with this terminology issue in mind, the discrepancy has led to some gaps being identified in the overall Risk Management Process.

Governance Hazards Inventory

Enbridge’s governance Risk Management Process requires that each sub-ordinate management system develop risk registers which is non-compliant with the requirements of OPR both in name and intent. The Board requires companies to develop an inventory of identified hazards and potential hazards.

Governance Risk Evaluation

Enbridge’s governance Risk Management Process includes a risk evaluation practice within it. The Board reviewed Enbridge’s Risk Evaluation practice. The method used to evaluate the risk of hazards (Enbridge – risks) was fully developed and appropriate if it was implemented as designed.

The Board’s audit also assessed the implementation of the risk evaluation process. This assessment determined that, while it was being implemented consistently across all of Enbridge’s programs, it was being utilized in a manner inconsistent with OPR requirements. Through interviews and document and record reviews, it was determined that Enbridge was implementing a practice whereby it applies the risk evaluation process to risks (hazards) taking into consideration the controls that may apply to the risk prior to the assessment. The result of this practice would be the identification of “residual” risk and assumes that the controls are directly applicable and appropriate to the hazard and that the control is being implemented fully on a consistent basis. The OPR process indicates that the risk evaluation should be applied directly to the hazard. This will determine “inherent” risk. This allows companies to fully identify the significance of the hazard and appropriately communicate, establish and implement controls and monitor it as required in the OPR.

In evaluating the establishment and implementation of the Enbridge’s Risk Management Process, the Risk Management Process Map provided in IMS-01 section 4.3 was noted to contain process steps that were colour-coded red and yellow. According to Enbridge, yellow colour coding indicates that the activities required to execute the process steps are not adequately documented or not fully implemented in a consistent manner. Red colour coding indicates that the process step is aspirational and is not being executed by the organization. Several process steps within the Risk Management

Process Map were colour coded red yet are regulated requirements within the overall Risk Management Process. For example, process step 16 – “identify, assess and prioritize risks” is a process step that is required to meet the requirements of OPR section 6.5(1)(e). The Board has previously communicated that it recognizes aspirational practices as part of sound continual improvement practices. If a company clearly demonstrates that its practices are above the legal requirements and proactively communicates them as such within its overall programs, the Board will not find them non-compliant with OPR section 4.

Governance Developing and Implementing Controls

The Board also reviewed Enbridge’s governance process for developing and implementing controls to prevent, manage and mitigate the identified hazards and risks. The Board found that Enbridge’s process did not meet the Board’s requirements with respect to the design of a process. As well, the Board was unable to see evidence of clear requirements and directions for considering and applying the hierarchy of controls when developing controls.

(Note: During its audit the Board noted that Enbridge’s Management and Protection Programs are directed by its Governance Management System Processes; therefore, a full review of the Governance Processes and their application at the “program” level follows.)

Emergency Management Program Hazard Identification, Risk Assessment and Control

Identification of Hazards and Potential Hazards Processes

Enbridge Emergency and Security Management System IMS-07 indicated its hazard process directly aligns with the IMS-01 process for risk and hence, deficiencies in the IMS level risk process noted in the above section apply to the Emergency Management program. Additionally, a review of the Enbridge IMS level risk approach indicated that Enbridge’s Emergency Management program utilized a ‘risk’ based approach for its process rather than a hazard-based approach required by the Board and the Canada Labour Code Part II. No other hazard or “risk” based hazard identification process documentation was provided during the audit.

During interviews, Enbridge staff identified that, from a risk assessment perspective, Enbridge considers that there is only one hazard to be considered and managed and therefore the program processes should appropriately focus on the associated “risks” rather than hazards as the hazards and potential hazards had been identified, as required. Enbridge identified that this singular hazard as oil release from its facilities. The Board finds that this practice is simplistic and, as noted above, not in keeping with the widely accepted hazard definition and identification practices. The Board notes that this practice does not allow for the formal identification and management of all hazards and secondary hazards such as those related to fire, explosion and the disruption of urban infrastructure, among others. This practice is found to be non-compliant with the Board’s requirements with respect to hazard and potential hazard identification.

Inventory of Hazards and Potential Hazards

At a governance level, Enbridge's IMS, section 4.3, Risk Management Process describes the responsibilities and standards the company follows to conduct risk assessments and develop its risk register for integration into its emergency planning. During the audit, Enbridge indicated that the risk register identified in the above IMS section fulfils its requirements with respect to the OPR hazard inventory requirements. The Board reviewed this document (Hazard and Risk Register, v1.1.1, 14 March 2014) and associated records during the audit and found that the risk register was limited to the identification and inventorying of business risks relating to the program and, in keeping with the singular hazard philosophy noted above, did not represent an "all-hazards and potential" approach. This practice is found to be non-compliant with the Board's requirements with respect to developing and maintaining a hazard and potential hazard inventory.

Evaluation of Risk

During the audit, Enbridge provided documentation to demonstrate the risk evaluation processes it had established for its emergency management program. Enbridge provided two approaches it was using for evaluation of risk: the IMS-01 approach, as noted above for evaluating business risks, and an "*Enbridge Risk Management Process*" document, dated 20 June 2013. The Board has found that the IMS-01 approach for risk is not fully appropriate to be applied to emergency management practices as it focused on business, environmental and specified health and safety risks and not on the evaluation of risks using an "all hazards" approach. The Board's review of the *Enbridge Risk Management Process* document indicated that it contained, what could be considered, high level procedures in the form of annotated process maps for providing direction to perform specific risk assessment techniques on specified activities and in specified circumstances. Examples of the specified activities and circumstances included: mainline repairs or replacements, changes in operating conditions (such as line pressure restriction) and added or removed assets (such as valves, instrumentation and tanks). Further, the Board's review of the *Risk Management Process* indicated that, similar to its review of the IMS-01 risk process, the process did not meet the Board's process design requirements outlined in Section 1.0 *Audit Terminology and Definitions* of the attached audit report. During the audit, Enbridge did not provide records demonstrating the application of the *Risk Management Process* within its emergency management program.

During the audit, Enbridge staff provided verbal information several times indicating that, the company initiated a project in 2013 to update its existing Index Model approach for risk assessment procedures to a quantitative model that would result in a more robust and comprehensive risk assessment program. Company staff indicated the new quantitative model will provide further definition and guidance on how the company evaluates risks and determines controls for upset and abnormal events includes placement of pipeline, valves, design and construction and emergency response. Enbridge, however, did not provide any documentation for review that supported the existing or updated practices.

Developing and Implementing Controls

As per, other sections reviewed within this sub-element, Enbridge indicated that, at the program level, it aligns directly and follows the IMS-01 process with respect to the Board's requirements to establish and implement a process for developing controls to prevent, manage and mitigate the identified hazards and risks.

During the audit Enbridge did provide documented evidence of controls such as emergency plans, control points, equipment, procedures in operations and maintenance manuals and studies of response time across all regions within its scope of operations (see sub-element 3.2 *Operational Control-Upset or Abnormal Operating Conditions*, below). The Board found that the Enbridge's controls were developed based on standard industry practices, input from its and other emergency response personnel, and knowledge gathered during its exercise activities and past responses. The Board views the practices described as part of a compliant process to develop controls; however, to be compliant, companies must demonstrate a documented process that specifically includes direct links between its hazards and evaluations of risk to the determination of the types, approach and development of these controls. The process must also allow the company to choose controls that allow it to follow a hierarchy of controls.

The Board has found that Enbridge has not established and implemented a process for developing and implementing controls that meets the OPR requirements.

Summary

The Board found that Enbridge had developed a governance management system process for identifying, evaluating and managing its hazards and risks; however, the Board also found that this governance level management system process did not meet the OPR requirements.

The Board found that, at the program level, Enbridge's hazard identification practices were considered to be simplistic and did not reflect common hazard identification practices. Enbridge's identification of a singular hazard approach combined with its corporately focused and undemonstrated risk evaluation practices is considered to be a foundational issue with respect to developing a management system driven emergency management program. The Board has found that Enbridge has not developed the OPR required sequential stepped-approach of hazard and potential hazard identification, evaluation of risk and determination of controls.

The Board found that Enbridge had not developed a program level risk evaluation process that addressed the OPR requirements. During the Audit Enbridge provided two documented processes as its Emergency Management program level risk evaluation processes. The Board found that the processes, alone or together, did not meet the OPR requirements as one focused on corporate risk and the other was applicable only to specific activities.

Regardless of the lack of a compliant process for developing controls, the Board found that Enbridge had established and implemented emergency management related controls and control practices such as the development of emergency response plans, tactical plans, pre-identification of control points and acquisition and placement of emergency response. The Board found that the controls had been developed based on standard accepted industry practices, input from its and other emergency response personnel and knowledge gathered during its exercise activities and past responses not by an established management system process.

The Board found that Enbridge had not established and implemented a documented management system process to develop and implement controls to prevent, manage and mitigate its identified hazards and risks.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Compliance Status: Non-Compliant

2.2 Legal Requirements

Expectations: The company shall have an established, implemented and effective process for identifying and monitoring compliance with all legal requirements that are applicable to the company in matters of safety, security and protection of the environment. The company shall have and maintain a list of those legal requirements. The company shall have a documented process to identify and resolve non-compliances as they relate to legal requirements, which includes updating the management and protection programs as required.

References: OPR section 6.5(1)(g),(h),(i)

Assessment:

Governance: Identifying Legal Requirements

At a governance level, Enbridge's IMS-01, *Governing Policy and Process Management System* and IMS-02, *Compliance and Ethics Management System* describe the company's processes for identifying and monitoring its compliance with legal requirements. The IMS-02, Compliance and Ethics Management System, section 4.5.1 indicates that the company is required to develop a master corporate compliance register and departmental compliance registers. The compliance registers link to the company's verification processes, which are described in IMS-01, section 4.4, *Health Checks* and IMS-01, section 4.5, *Internal Reviews*. IMS-02, section 5.2, *Performance Measurement and Management*, describes the company's governance processes for measuring and monitoring its compliance.

The OPR requires a company to establish and implement a process to identify its legal requirements and establish and maintain a legal list of the identified requirements. IMS-02 section 4.5.1 outlines Enbridge's processes for identifying its legal requirements and outlines requirements to develop master and departmental compliance registers. Review of this process indicated that it aligns with the OPR process requirements for identifying legal requirements and establishing and maintaining a legal list. Review of the process as documented identified that, by description it should lead to a compliant process. For example the process includes steps requiring monitoring of legal changes, updating compliance, etc. It also establishes roles and responsibilities. However, the Board's audit of this process identified that it was limited to description of the requirements and did not meet the Board's management system process requirements. Further, the process does not require the development of a single legal list. The process includes requirements to develop a master compliance register; however, this register specifically excludes certain requirements such as in orders and permits. These are to be tracked in individual departmental compliance registers.

The Board also reviewed the linked compliance verification processes that Enbridge indicated were used to monitor compliance and resolve non-compliances. The Board's review indicated that some of the processes are not designed to meet the Board's requirements. For example, both the

Health Check and Internal Review processes are specifically not expected to be comprehensive with respect to evaluating departmental or management functions or departmental or project performance. Additionally, as described in the Internal Audit sub-element 4.3 below, the Internal Review process has not been established and implemented at the time of the audit and Health Checks appear to be limited to reviewing the existing identified requirements that have been integrated within its existing processes and practices.

(Note: During its audit the Board noted that Enbridge's Management and Protection Programs are directed by its Governance Management System Processes; therefore, a full review of the Governance Processes and their application at the "program" level follows.)

Emergency Management Program Legal Requirements

Identifying and Monitoring Compliance

IMS-07, *Compliance Register* describes the process and responsibilities involved in reviewing sources for information about regulatory changes that apply to the company. This process also describes how Enbridge implements regulatory changes in its Emergency Management program.

Enbridge's Emergency and Security department personnel indicated that the company has formal processes for identifying and maintaining applicable legal requirements in a register. However, personnel indicated that the specific, program level processes for the Emergency and Security department are still under development. The Board found that Enbridge had not established and implemented a process for identifying, and monitoring its compliance with all legal requirements that apply to the company in matters of safety, security and protection of the environment.

Establishing and Maintaining a List of Legal Requirements

The company's Emergency and Security department has developed an IMS-07 Compliance Register. The register is comprised of a table with a comprehensive description of applicable regulatory requirements including the section or part number related to the compliance requirement. Enbridge includes legal updates for its Liquids Pipelines business unit in a monthly publication posted on the company's intranet.

The Board found that Enbridge has demonstrated that it keeps a comprehensive list of regulatory requirements that includes section and part identification for applicable requirements.

Monitoring Compliance

The Emergency and Security department is responsible for assessing compliance to current and pending regulations and maintaining a list of legal

requirements for that department. Enbridge's Emergency Response Coordinators across the region indicated that they are responsible for identifying regional and local non-compliances, and communicating the issue to local management and the Emergency Response department. The Board found the program level practices used by the Emergency and Security department or identifying and monitoring compliance with legal requirements has been implemented as presently required.

Summary

The Board found that Enbridge had developed a number of governance and program level processes and practices for identifying and monitoring its legal requirements. This included establishing and maintaining a comprehensive list of regulatory requirements at the program level.

The Board also found that Enbridge's governance management system processes did not meet the OPR requirements with respect to process design and implementation.

The Board found that Enbridge had not established and maintained the legal list as required by the OPR.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Compliance Status: Non-Compliant

2.3 Goals, Objectives and Targets

Expectations: The company shall have an established, implemented and effective process for developing and setting goals, objectives and specific targets relevant to the risks and hazards associated with the company's facilities and activities (i.e., construction, operation and maintenance). The company's process for setting objectives and specific targets shall ensure that the objectives and targets are those required to achieve its goals, and shall ensure that the objectives and targets are reviewed annually.

The company shall include goals for the prevention of ruptures, liquid and gas releases, fatalities and injuries, and for the response to incidents and emergency situations. The company's goals shall be communicated to employees.

The company shall develop performance measures for assessing the company's success in achieving its goals, objectives, and targets. The company shall annually review its performance in achieving its goals, objectives and targets and the performance of its management system. The company shall document the annual review of its performance, including the actions taken during the year to correct any deficiencies identified in its Quality Assurance program, in an annual report, signed by the accountable officer.

References: OPR sections 6.3, 6.5(1)(a),(b), 6.6

Assessment:

Governance: Goals, Objectives and Targets for Risks and Hazards

The OPR does not include any specific management system process requirements for developing policies and goals. However, Enbridge has established clear management system guidance with respect to its process for developing policies and goals. At a governance level, Enbridge's IMS-01, *Governance Documentation* outlines the company's expectations for documenting key corporate policies, such as the *Strategic and Business Planning Processes*. The *Governance Documentation* also explains the company's "Planning Cascade" and associated documentation. This Planning Cascade document explains how the company links its policies and corporate vision to its performance targets and metrics. The practices described within the *Governance Documentation* process align with the Board's requirements for establishing policies, goals, objectives, targets and performance measures. While not an absolute alignment between the Board's requirements and Enbridge's internal processes it does reflect integration of the Board's requirements into Enbridge's business management practices.

(Note: During its audit the Board noted that Enbridge's Management and Protection Programs are directed by its Governance Management System Processes; therefore, a full review of the Governance Processes and their application at the "program" level follows.)

Emergency Management Program Goals

(Enbridge demonstrated that its program level Goals, Objectives and Targets aligned with the governance requirements; therefore, this section will focus on the specific goal requirements found in the OPR which apply to this program.)

The OPR identifies that a company must have goals for preventing ruptures, liquid and gas releases, fatalities and injuries, as well as for responding to incidents and emergency situations. For this audit, in addition to the LP goals and associated processes and practices as described in the governance section above, the Board included an evaluation of Enbridge's Emergency Management program level goals, objectives and targets, specifically the goals for the response to the incident and emergency situations as described in OPR section 6.3(1)(b) and the corresponding objectives, specific targets and performance measures described in OPR section 6.5(1)(a) and (b).

The Board reviewed various documents and records and interviewed staff in its audit of this sub-element and found that Enbridge had not established the required goals on which to base its emergency response program on and the subsequent objectives, targets and performance measures. As examples, the Board would expect documented goals with related to incident response times, communication with stakeholders and first responders, etc.

Review of information provided by Enbridge and its employees demonstrated that, although Enbridge did not demonstrate that it had explicit goals for the response to incidents and emergency situations, Enbridge did demonstrate that it was communicating its existing goals and priorities to its employees through a variety of means including staff presentations, emails, intranet advisories and within its planning documents and scorecards.

Summary

The Board found that Enbridge demonstrated an alignment between its governance processes and with the OPR requirements.

The Board also found that Enbridge had not established explicit goals relating response to incidents and emergency situations as required by the OPR.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Compliance Status: Non-Compliant

2.4 Organizational Structure, Roles and Responsibilities

Expectations: The company shall have a documented organizational structure that enables it to meet the requirements of its management system and its obligations to carry out activities in a manner that ensures the safety and security of the public, company employees and the pipeline, and protection of property and the environment. The documented structure shall enable the company to determine and communicate the roles, responsibilities and authority of the officers and employees at all levels. The company shall document contractors' responsibilities in its construction and maintenance safety manuals.

The documented organizational structure shall also enable the company to demonstrate that the human resources allocated to establishing, implementing and maintaining the management system are sufficient to meet the requirements of the management system and to meet the company's obligations to design, construct, operate or abandon its facilities to ensure the safety and security of the public and the company's employees, and the protection of property and the environment. The company shall complete an annual documented evaluation in order to demonstrate adequate human resourcing to meet these obligations.

References: OPR sections 6.4, 20, 31

Assessment:

Governance Organizational Structure and Roles and Responsibilities

At a governance level, Enbridge demonstrated that it has a single, over-arching management system process that describes the organizational structure and responsibilities for the ongoing development and implementation of its management system. The IMS documents defined the roles and responsibilities regarding occupational health and safety of all employees and contractors.

The governance management system documents indicated that Enbridge's executive management was responsible for upholding the management system policies, process, standards and requirements. They were also responsible for ensuring that appropriate resources are available to monitor compliance and implement continuous improvement of the management system. Further the documentation identified that Enbridge's President's responsibilities include allocating the resources necessary for management system compliance.

Governance Annual Evaluation of Resource Need

Enbridge demonstrated that it has developed a number of corporately required or supported mechanisms for evaluating its resourcing needs.

Enbridge did not; however, provide specific documentation and records to demonstrate it evaluates the need for human resources allocated to establishing, implementing and maintaining its management system and explicitly meeting its OPR section 6 obligations at a corporate or program level.

(Note: During its audit the Board noted that Enbridge's Management and Protection Programs are directed by its Governance Management System Processes; therefore, a full review of the Governance Processes and their application at the "program" level follows.)

Emergency Management Program Organizational Structure and Roles and Responsibilities

During the audit Enbridge demonstrated that its program specific Emergency and Security Management System outlines emergency accountabilities and responsibilities for the company's line management, regional Operations staff and contractors. This document describes the roles involved in coordinating Emergency and Security Management functions and the organization and reporting relationships for the Emergency and Security Management functions. Enbridge's regional Emergency Response Coordinators identified that local management maintains job descriptions with defined roles and responsibilities. Enbridge uses position description templates to document these roles and responsibilities and job ladders to clearly define the knowledge, skills and abilities required at each level of a functional area. Additional roles and responsibilities are outlined in process documents or integrated into process documents such as the governance IMS manuals.

Additionally, and specific to Enbridge's emergency/incident response practices, Enbridge demonstrated that it had formally adopted the Incident Command Structure (ICS) that establishes a formal and proven organization structure for managing incidents and includes standardized and documented roles and responsibilities statements.

Annual Evaluation of Resource Needs

Enbridge demonstrated that it uses several mechanisms to evaluate human resources needs for its emergency management program. Key examples include:

- Liquids Pipelines priorities and objectives review and planning – The leadership team defines the key priorities and objectives for Liquids Pipelines in alignment with the *Strategic Plan*; the *Strategic Plan* defines the focus and priorities for the company as a whole;

- Emergency and Security Department Plan development – IMS-01 processes outline the steps involved in developing a Department Plan;
- Workforce planning – The Enbridge Human Resources department leads the Emergency and Security department through the Workforce Budgeting process. As a result of this process, the department identifies the job types and the number of each job type required to ensure there are sufficient resources to meet management and protection requirements.
- Annual Work Plan update and development – The Emergency and Security department develops a detailed annual work plan that takes into account the priorities, objectives and Department Plan of the Liquids Pipelines business unit.
- Individual Objectives development – Emergency and Security department personnel work with their designed People Leader to develop individual objectives at the beginning of each calendar year. These objectives become part of each employee’s performance management plan.

During the audit Enbridge provided an example of how the company assesses the completion status of its business activities during the year. The examples demonstrated that additional resources are available if they are required. In interviews, Emergency and Security department personnel indicated that the Emergency Management Systems Specialist position at the corporate level was approved and a job posting was issued.

The Board identified three program level issues with respect to Enbridge’s evaluation of need for its emergency management program.

Enbridge was unable to demonstrate that it had quantified the human resources required to respond to an emergency and subsequently it had not included these resources in its annual evaluation of need. The Board noted that staff at all levels and regions within the company identified that there would not be and never has been an issue with acquiring all required resources to respond to an incident. Based on a review of Enbridge’s past incident responses and records, the Board has not identified any resourcing issues related to Enbridge’s responses. The Board, however, requires that all of its regulated companies must demonstrate the sufficiency of its human resources to meet its obligations to ensure the safety of the public, its employees and the pipeline; and ensures the protection of property and the environment in a documented manner. This would necessitate a documented, quantified knowledge of the human resources required to respond to an emergency as per their emergency planning.

The Board identified that the resource evaluation mechanisms described were being implemented within the Emergency and Security department. In reviewing the documentation and records associated with resource evaluation mechanisms, the Board identified that Enbridge’s practices were not accounting for staff outside of the department with emergency management responsibilities. For example Field Operations and Maintenance staff have emergency management responsibilities that must be accounted for.

Additionally, Enbridge did not provide specific documentation to demonstrate it evaluates the need for human resources allocated to establishing, implementing and maintaining its management system and meeting its obligations as described in the OPR.

Summary

The Board found that Enbridge had a documented organizational structure and communicates the roles responsibilities and authorities of the officers and employees at all levels of the company. Additionally, the Board found that Enbridge had adopted ICS which establishes a proven incident response organizational structure with documented roles and responsibilities.

The Board found that Enbridge had established and implemented several mechanisms for reviewing its emergency management program human resourcing needs.

The Board also found that Enbridge’s evaluation of need practices did not specifically account for staff with emergency management responsibilities outside of the Emergency and Security department. Further, Enbridge did not demonstrate that it had documented an evaluation of the human resource needs required during an actual response.

Based on the Board’s evaluation of Enbridge’s management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Compliance Status: Non-Compliant

3.0 IMPLEMENTATION
<p>3.1 Operational Control-Normal Operations</p> <p>Expectations: The company shall have an established, implemented and effective process for developing and implementing corrective, mitigative, preventive and protective controls associated with the hazards and risks identified in elements 2.0 and 3.0, and for communicating these controls to anyone who is exposed to the risks.</p> <p>The company shall have an established, implemented and effective process for coordinating, controlling and managing the operational activities of employees and other people working with or on behalf of the company.</p>
<p>References: OPR section 6.5(1)(e),(f),(q)</p>
<p>Assessment:</p> <p>The Board notes that the Emergency Management program addresses only abnormal or upset operations. This section is therefore considered not to apply in this audit. The review of Enbridge’s controls is documented in sub-element 3.2, below.</p>
<p>Compliance Status: N/A</p>

3.2 Operational Control-Upset or Abnormal Operating Conditions

Expectations: The company shall establish and maintain plans and procedures to identify the potential for upset or abnormal operating conditions, accidental releases, incidents and emergency situations. The company shall also define proposed responses to these events and prevent and mitigate the likely consequence and/or impacts of these events. The procedures must be periodically tested and reviewed, and revised where appropriate (for example, after upset or abnormal events). The company shall have an established, implemented and effective process for developing contingency plans for abnormal events that may occur during construction, operation, maintenance, abandonment or emergency situations.

References: OPR section 6.5(1)(c)(d)(e)(f)(t)

Assessment:

Governance Developing and Implementing Operational Controls – Upset or Abnormal Operations

At a governance level, Enbridge's IMS-01, section 4.3, *Risk Management Process* describes the company's process for developing and implementing controls for addressing its hazards and risks. As noted in sub-element 2.1 of this audit, the Board found that this Enbridge process is non-compliant for several reasons, including the process design and implementation of the hierarchy of controls. Since the Board has already identified that Enbridge will have to develop corrective action plans for sub-element 2.1, the Board will not assign additional non-compliances for the governance process in this sub-element; however, Enbridge must specifically consider and include any corrective actions associated with this sub-element within the corrective action developed plan developed for sub-element 2.1.

Governance Processes for Coordinating, Controlling and Managing the Operational Activities of Employees and other People Working With or On Behalf of the Company

These management system process requirements are described in OPR section 6.5(1)(k) and (q). During the audit Enbridge indicated that these requirements were described within its IMS-01 sections 2.4 *Management System Development and Implementation Requirements* and 4.14 *Workforce Competency and Qualification Management Process* and in its OMMs and various other program level processes.

Review of the IMS processes indicated that they did not address the requirements identified in the sub-element directly and that, as noted elsewhere in this report the IMS-01 4.14 *Workforce Competency and Qualification Management Process* has not been demonstrated to be established or implemented. Review of the OMM processes indicated that they were not considered as governance management system process within the

company. Enbridge is therefore non-compliant with respect to its OPR management system process requirements.

(Note: During its audit the Board noted that Enbridge's Management and Protection Programs are directed by its Governance Management System Processes; therefore, a full review of the Governance Processes and their application at the "program" level follows.)

Emergency Management Program Upset or Abnormal Operating Conditions

As identified in sub-element 2.1 of this audit, the Board has found Enbridge Non-Compliant with respect to the requirements to establish and implement a process for developing and implementing controls to prevent, manage and mitigate its identified hazards and risks. Regardless of the lack of a compliant process for developing controls, during the audit, Enbridge provided documents and records to demonstrate that it had developed controls to address the hazards and risks normally associated with an incident and subsequent emergency response on its system. The Board found that Enbridge had developed the controls based on standard accepted industry practices, professional knowledge and learnings (input from its and other emergency response personnel and knowledge gathered during its exercise activities and past responses). The Board further found that, in the absence of a compliant controls development and associated hazard and risk identification and evaluation processes, Enbridge could not formally demonstrate or verify that its existing controls were adequate or, in the case of equipment and associated human resources, located in appropriate locations.

In the absence of compliant processes with respect to hazard identification, risk assessment and the development of controls, the Board evaluated Enbridge's existing controls based on the documents and records provided by Enbridge; and through interviews with Enbridge's head office and field staff. The Board also visited each of Enbridge's operational regions to familiarize itself with Enbridge's operations and operating environments, identify hazards and risks, review field plans and documentation and records and verify the existence and condition of equipment.

During the audit, Enbridge provided evidence of the development, implementation and maintenance of controls. Examples of the controls included administrative controls, response equipment and communications activities, among others. Examples of administrative controls reviewed included: Emergency Procedures Manuals, site-specific and regional response plans, pre-determined tactical plans, tank fire plans, pre-established control point documentation, membership in spill cooperatives, etc. Examples of emergency equipment included: response trailers, booms, boats, oil skimmers, pumps, generators, etc. The Board found that Enbridge developed controls that, based on the Board's qualitative assessment, correspond to its hazards, risks, activities and locations. Enbridge demonstrated that it had dedicated significant resources to acquiring equipment for emergency response and had also established agreements with response specialists and other industry organizations for emergency response preparedness and response activities.

During the audit, Enbridge staff identified that the company's primary emergency response controls related requirements are contained or referenced within its Operations and Maintenance Manuals (OMMs) in Book 7. The OMMs were identified as being used by Enbridge's Emergency Management staff and its Field Operations and Maintenance workers and outlined the written procedures, standards and tools used for development, implementation, maintenance and communicating of the corrective, mitigative, preventive and protective measures (commonly referred to as "controls") to manage Enbridge's emergency responses. This manual and associated documentation and any updates are required to be submitted to the Board.

As part of the audit, the Board reviewed the adequacy and maintenance of Enbridge's manual and any associated documentation submitted to the Board. The Board utilized its standardized emergency procedures manual review procedure.

The Board's manual review found that Enbridge's manuals had some deficiencies. Analysis of the deficiencies indicates that the findings fell within two categories: administrative deficiencies and content based deficiencies. Examples of administrative issues identified would be document management issues associated with distribution lists or missing control numbers in the submitted documentation. Content based issues related to old or outdated information in the copies filed to the Board. The outdated information related to out of date environmental sensitivity mapping. With respect to the sensitivity mapping, Enbridge indicated that the information was available but was substantial in volume. Enbridge agreed to provide the information in digital format. As per the Board's normal process, Enbridge has been issued Notices of Non-Compliance with an agreed upon compliance date for all outstanding issues of 31 January 2015.

The Board identified that Enbridge has initiated and progressed on a new approach for emergency planning and documentation. This was referred to as its "integrated contingency plan" approach. The Board confirmed that Enbridge's plan is to eventually replace all of the Book 7 content with the new integrated contingency plans. The company provided a draft of the *Integrated Contingency Plan* for one of Enbridge's Regions, the Eastern Region; however, this document had not been finalized at the time of the audit. The Board noted that the new Integrated Contingency Plans are being developed based on a best practices approach rather than using a hazards/risks approach.

Emergency Management Program Processes for Coordinating, Controlling and Managing the Response Activities of Employees and other People Working With or On Behalf of the Company

During the audit, Enbridge demonstrated that, in addition to the practices that govern Enbridge employees and workers undertaking normal operations activities, Enbridge has adopted the Incident Command System (ICS) to coordinate and manage its responses. The Board notes that ICS is a well-known and widely accepted management structure for managing large, small, escalating or deescalating incidents. ICS also allows companies to integrate other agencies or organizations into its response structure to ensure that regulatory and public safety requirements are being met.

Enbridge demonstrated that its staff had received appropriate training commensurate to their levels of involvement and oversight.

Summary

Based on interviews, and document and record reviews, the Board found that Enbridge demonstrated that had numerous controls for its emergency program such as emergency response plans, tactical plans, tank fire plans etc. The Board found that Enbridge had developed its controls (plans, equipment etc.) based on industry practices, input from emergency response personnel expertise and experience with historical events. Further, the Board found that Enbridge has demonstrated that it had dedicated significant resources to acquiring equipment for emergency response and had also established agreements with response specialists and other industry organizations for emergency response preparedness and response activities.

The Board found that Enbridge developed controls that, based on the Board's assessment, correspond to its hazards, risks, activities and locations.

In conjunction of this audit but as part of separate compliance verification process, the Board reviewed Enbridge's Emergency Procedures manuals. The Board found deficiencies that Enbridge had agreed to rectify by 31 January 2015. Enbridge subsequently submitted information that it believes addresses the Board's concerns. The Board is in the process of reviewing this information.

The Board has found that Enbridge has not utilized a sequential stepped approach for hazard and potential hazard identification, evaluation of risk and determination of controls. The Board further found that, in the absence of a compliant controls development and associated hazard and risk identification and evaluation processes, Enbridge could not formally demonstrate or verify that its existing controls were adequate or, in the case of equipment and associated human resources, located in appropriate locations.

The Board found that Enbridge had established and implemented ICS (Incident Command Structure) as its standard process for coordinating, controlling and managing the response activities of employees and other people working with or on behalf of the company during an incident.

Based on the Board's evaluation of Enbridge's management system and the Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Compliance Status: Non-Compliant

3.3 Management of Change

Expectations: The company shall have an established, implemented and effective process for identifying and managing any change that could affect safety, security or protection of the environment, including any new hazard or risk, any change in a design, specification, standard or procedure and any change in the company’s organizational structure or the legal requirements applicable to the company.

References: OPR section 6.5(1)(i)

Assessment:

Governance Management of Change Process

During the audit, Enbridge identified that it had developed a governance management of change process. In reviewing the documents and records and conducting interviews, the Board found that Enbridge’s governance process had not been fully established or implemented at the time of the Board’s audit. The Board’s review found that Enbridge’s design of its governance process does not meet the OPR management system process requirements.

During the audit, Enbridge indicated that MOC processes and requirements are embedded in all of its existing written processes, procedures and practices. Enbridge indicated that a single MOC process would not be able to meet its or other companies with significant facilities and processes, requirements. Therefore, Enbridge has multiple processes embedded in multiple locations. Further, Enbridge indicated that its interpretation of the OPR is to “ensure that a MOC process is available for unplanned, unexpected or infrequent changes that are not already embedded in existing activities and processes. There is no requirement in the OPR for these various management of change processes to be formally tied to one another.”

The Board has found that Enbridge’s interpretation and practices are inconsistent with the Board’s interpretation of the OPR process requirements. The Board notes that the OPR requires a company to develop a management system MOC process that identifies and manages any change that could affect safety, security or the protection of the environment, not only those described by Enbridge. Further the Board notes that, while a company may have multiple processes, there still must be consistency in process requirements, development and implementation as well as coordination of the various practices in order to meet the OPR requirements and to ensure formal management. The Board notes that a singular management system process developed to meet the OPR requirements, as prescribed, would address these requirements.

(Note: During its audit the Board noted that Enbridge’s Management and Protection Programs are directed by its Governance Management System Processes; therefore, a full review of the Governance Processes and their application at the “program” level follows.)

Emergency Management Program Management of Change Process

The Board found that, at the department level, IMS-07, section *Management of Change* referenced Enbridge's IMS-01 governance process.

Additionally, the company's Operating & Maintenance Procedures Management System (OMMs), Book 7, *Emergency Response* and Book 1, *General Compliance Reference* described the company's requirements for MOC. The Board has found that these requirements in Book 7 were focused on the updating of the Emergency Plans and are not overall management of change process. As well, Enbridge staff interviewed consistently identified that the primary MOC process in use at the time of the audit was the LP MOC process which is included in Enbridge's OMM documentation.

Review of Enbridge's program level MOC practices indicated that, notwithstanding the governance process issues described above, the Board found that Enbridge had established and embedded MOC requirements within many aspects of its emergency management program.

In addition, Enbridge demonstrated that it had developed and implemented a Project Integration Program for Emergency Management that ensures that the Emergency Management Program is up-to-date before projects are handed over to Operations. Key activities involved in the Project Integration Program include defining roles and responsibilities, assessing the impact of new construction on existing emergency management program elements, updating the Emergency Management Program and communicating any changes to internal stakeholders.

Summary

The Board found that Enbridge demonstrated that it had established and implemented a number of MOC procedures and practices to document and manage change at the program level. The Board identified that all departments and programs were using Enbridge's Liquids Pipelines MOC process, including Emergency Management, as its primary corporate MOC process. The Board, however, identified that this process did not meet all of the MOC process requirements and was specifically not intended to be included within its IMS process.

The Board also found that Enbridge was did not demonstrate that it had established and implemented a management system level process that meets the requirements of the OPR.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Compliance Status: Non-Compliant

3.4 Training, Competence and Evaluation

Expectations: The company shall have an established, implemented and effective process for developing competency requirements and training programs that provide employees and other persons working with or on behalf of the company with the training that will enable them to perform their duties in a manner that is safe, ensures the security of the pipeline and protects the environment.

The company shall have an established, implemented and effective process for verifying that employees and other persons working with or on behalf of the company are trained and competent, and for supervising them to ensure that they perform their duties in a manner that is safe, ensures the security of the pipeline and protects the environment. The company shall have an established, implemented and effective process for making employees and other persons working with or on behalf of the company aware of their responsibilities in relation to the processes and procedures required by the management system or the company's protection programs.

The company shall have an established, implemented and effective process for generating and managing training documents and records.

References: OPR section 6.5(1) (j),(k),(l),(p)

Assessment:

Governance Competency Processes and Training Program

Through interviews and document and record review, the Board found that Enbridge has established and implemented a documented, comprehensive training program applicable to its employees undertaking emergency management activities. The training program is appropriately supported and managed throughout the organization. Enbridge has developed a management system called the Enbridge Learning Management System (eLMS). eLMS provides the mechanism to register, deliver, track and record learning completions. Enbridge's Human Resources department provides support to all departments for the development of departmental content and eLearning programs and each department manages the content of programs housed in eLMS. The Board verified that Enbridge has implemented the systems to generate, manage and document the various training programs through front line interviews and inspections.

Notwithstanding Enbridge's training program implementation, the Board found that Enbridge had not established and implemented compliant, documented processes for developing competency requirements that are used to develop training and learning programs and to establish baseline competencies required for employees and others working on behalf of the company to perform assigned tasks in a manner that is that is safe, ensures the security of the pipeline and protects the environment. Similarly, the Board found that Enbridge has not established and implemented a process for verifying competency as required. Interviews with staff indicated that there were undocumented competency evaluation processes being undertaken

at the time of the audit; however, they did not meet the Board's management system process requirements. Record reviews conducted by the Board indicated that Enbridge had at one time implemented a formal Competency Based Training program but that had been officially discontinued a number of years ago. It was identified that staff in some of the regions were still implementing the practices of this program as a method to ensure competency of new staff.

The Board considers competency identification and verification to be a key component in assuring the safety of workers, the public, the environment and facilities. Therefore, this issue was brought to Enbridge's attention as requiring urgent attention. Enbridge has responded by developing an interim process for identifying and verifying competencies while Enbridge's Workforce Competency and Qualification Process (WCQP), commenced in 2013, is fully rolled out. This was provided to the Board for review prior to end of its close-out discussions. While not yet demonstrated as established or implemented, based on initial interviews with departmental staff, the Board found that the described practices could meet the Board's requirements.

The Board's review of the written governance policy that had been provided by Enbridge indicated that some of the key legally required process requirements were mapped as "red". According to Enbridge's described process mapping convention this would indicate that the process steps are "aspirational" and therefore outside of its legal requirements to be measured by the Board. As noted elsewhere in this report, aspirational or stretch practices are encouraged but they cannot include legally required content within this category.

(Note: During its audit the Board noted that Enbridge's Management and Protection Programs are directed by its Governance Management System Processes; therefore, a full review of the Governance Processes and their application at the "program" level follows.)

Emergency Management Program Competency Process and Training Program

The Board identified that, at the department level, the Emergency and Security Management System, section 4.5.7, *Emergency and Security Training Process* outlines the training processes for incident command, emergency operations and security management across the Liquids Pipelines business unit. The *General* section of this document indicates that the training matrices and integrated contingency plans are created due to regulatory requirements, new emergency response equipment and training needs identified as a result of a post-emergency or exercise analyses.

Training

The Board examined Enbridge's implementation of its corporate training requirements for its Emergency Management program.

The Board identified that Enbridge's OMM Book 7, *Emergency Response Training Matrix* defines the minimum amount of emergency response training required to ensure that personnel have the appropriate knowledge and skills to comply with regulations and respond to emergencies as per the company's plans. The *Emergency Response Training Matrix* identifies the required courses along with estimated training hours, training frequency and the provider of the training. The matrix also defines training required by each job function, and specifies whether the training is

mandatory, at the discretion of regional management or not required. For example, the training program for the company's Emergency Management program includes tactical training, Incident Command System training, and hazardous waste operations and emergency response training. The Board reviewed a sampling of training records across each Region for emergency preparedness and response was found that the training being undertaken was consistent with the requirements documented in the *Emergency Response Training Matrix*. The Board did not find any significant issues.

Competency

In addition to the governance evaluation of competency practices evaluated in the governance section above, the Board evaluated program level practices.

Interviews with Emergency and Security department personnel indicated that a Learning Path Project is in progress. The Learning Path Project is a corporately established training practice that focuses on competency-based training for pipeline management, welders and other personnel that perform the emergency response activities detailed in Book 3 and 4. Enbridge provided information that identified that the training for the Emergency Management program consisted of customized, competency-based, on-the-job training provided to Enbridge field personnel. A learning path progression model established the following training sequence: competency, qualifying, continuous learning, maintenance, second level of qualification (if necessary) and mastery. Qualification levels include Core Level 1 (observation), Core Level 2 (demonstrating performance), Awareness and Region Specific (qualified). The review of this initiative indicated that, while it was not established or implemented as per the Board's requirements, it did represent a practice that could mitigate Enbridge's deficiencies if designed and implemented to meet the requirements.

During the audit it was noted that, at the program level, Enbridge had documented many of the competencies and qualifications for emergency management field operations functions in the Liquids Pipelines business unit. During the audit, the Board reviewed competency and qualifications for the following functions: the First-On-Scene Responder Learner Package, the Security Learner Package, and the Containment and Recovery Learner Package. The Learning Plan for the Emergency Management program included documentation that outlined the training required before personnel are allowed onto a work site, on-the-job learning requirements and competency maintenance requirements.

Process for Verification

The Board identified that, consistent with the governance process assessment, Enbridge did not demonstrate that it had a competency verification process that met the OPR requirements. The Board does note, however, Enbridge's recently developed emergency management Learning Path included an assessment recording practice for verifying the competencies acquired through training. The Learning Path included performance criteria and knowledge criteria. As noted above, however, the Learning Path was still in development and had not been fully implemented at the time of the Board's audit. Therefore, Enbridge had not yet established a process for verifying the competency and training of people involved in the Emergency Management program.

Review of the program training and competency documentation and records identified one issue. Through interviews with Emergency and Security department personnel and documentation review, the Board found that Enbridge had not defined training and competency requirements associated with its specialized emergency response equipment. Interviews with Emergency Response Coordinators across the regions confirmed that the company had not completed training needs assessments nor had the company listed the emergency response equipment and the training, competency, qualifications and certifications, if required, to use that equipment. The Board notes that companies have the responsibility to ensure that employees are appropriately trained on the use of all equipment they use during the course of their employment. Due to the specialized nature of the emergency response equipment, however, and the role that the equipment plays in protecting people and the environment and the hazardous nature of the work sites where the equipment will be deployed, the Board is of the view that the associated training, competency and certification requirement must be identified, documented and managed.

Summary

The Board found that Enbridge had established and implemented a formal management program for identifying and managing its training requirements.

The Board also found that Enbridge had not established and implemented processes for developing and verifying competency requirements as required by the OPR. The Board also found that Enbridge had started to implement a new process for the identification and verification of worker competency; however, this new process remains non-compliant as it has not been established or implemented.

The Board found that Enbridge had not formally identified, documented and managed the training and competency requirements associated with its specialized emergency response equipment.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Compliance Status: Non-Compliant

3.5 Communication

Expectations: The company shall have an established, implemented and effective process for the internal and external communication of information relating to safety, security and environmental protection. The process should include procedures for communication with the public, company employees, contractors, regulatory agencies and emergency responders.

References: OPR section 6.5(1)(m)

Assessment:

Governance Communication Process

The Board found that Enbridge's governance level management system processes are inadequate. Enbridge's IMS-01 is limited to requiring that each department must develop a communication plan and does not meet the OPR requirements.

(Note: During its audit the Board noted that Enbridge's Management and Protection Programs are directed by its Governance Management System Processes; therefore, a full review of the Governance Processes and their application at the "program" level follows.)

Emergency Management Program Internal Communication

While Enbridge was unable to demonstrate that it had established and implemented compliant management system communications processes, Enbridge provided program level documentation and records that indicated it had established formal internal communication practices. Enbridge's Emergency and Security Management System manual, section 4.4, *Communication, Participation and Engagement* defined several communication methods including:

- orientations;
- bulletins and advisories;
- 'Preparedness Week' communications; and
- emergency and security management process and procedure reviews.

Further Enbridge demonstrated that its management communicates its expectations on a regular basis through field safety visits, safety moments, safety observations, high-value learning events, emails, eLink, desk drops, posters, and other methods. Enbridge provided information that identified that its Emergency and Security department maintained several committees in which regional Emergency Response Coordinators participated and

then shared information out to the various regions with respect to the program.

Emergency Management Program External Communication – Emergency Response

Interviews with Emergency Response Coordinators indicated that Enbridge communicates with various external groups using a variety of methods. The company uses its landowner communications processes to communicate with landowners. Regional Emergency Response Coordinators manage communications with provincial and municipal response agencies and stakeholders such as provincial emergency coordinators, police, fire departments, hospitals, etc. Other external communication vehicles included Enbridge’s Public Awareness program, its website, news releases, local broadcast media and direct contact, where appropriate.

Enbridge demonstrated that, in the event of an emergency, its Emergency Response Plans contain provisions to ensure that regulatory and response agencies and landowners will be notified. Enbridge demonstrated through documentation and records it had established and implemented processes to ensure that the communication information was being kept up to date.

During the audit Enbridge provided information that it had established processes and methodologies to manage and ensure communications during a response. Enbridge demonstrated that its Incident Command System included formal, documented requirements and provisions for internal and external communications. It was noted that the Incident Command System defines specific responsibilities for the public information officer that includes tools, such as role statements and checklists to aid in the organization and management of the communication requirements. Further, Enbridge provided evidence that its Public Affairs and Communication Group is prepared to assist in emergencies by providing clear, factual communication and by laying the groundwork for community relations and media coverage. Enbridge demonstrated it had established methodologies to communicate emergency evacuation information, if required. Enbridge demonstrated that had prepared Emergency Communications standards for communicating internally and externally in the event of an emergency, including alternate means of communication if traditional methods fail and public notification methods if an emergency evacuation is required.

Emergency Management Program External Communication – Liaison with Stakeholders and Response Personnel

Interviews with Enbridge’s Emergency and Security department personnel indicated that emergency response procedures have been shared with government agencies and organizations at the federal level. Regional Emergency Response Coordinators had communicated emergency response activities to regional and local stakeholders.

Enbridge had developed Book 7, 02-02-07, *Impacted Landowners and Tenants* to identify the tasks and duties required when an emergency threatens to impact landowners and tenants or already has had an impact. The documentation indicated that Land and ROW agents are responsible for

completing ROW emergency response packets and distributing pamphlets to be hung on doors. Enbridge described the measures are to be taken to assist landowners and tenants based on the emergency classification, associated tiered responses and the specific circumstances of an emergency. Interviews indicated that Enbridge uses a variety of communication methods in its various regions due to stakeholder capabilities and their anticipated roles in emergency response. Examples provided included having informal discussions with fire department volunteers, providing emergency response documents and holding formal meetings with stakeholders, government agencies and municipal agencies.

Enbridge provided information identifying that it has developed a continuing education program for landowners, other appropriate organizations and agencies, and the public residing adjacent to the pipeline. Enbridge staff indicated that its continuing education program informs people of the location of the pipeline, potential emergency situations involving the pipeline, and the safety procedures to be followed in the case of an emergency. Enbridge uses information packets, ongoing communication, visits and other mechanisms to implement this continuing education program in each region.

The Board's review of Enbridge's external emergency management communication requirements identified a number of deficiencies.

Enbridge did not demonstrate that it had an external communication process directly applicable to its continuing education program. Additionally, Enbridge had not established or implemented a process that ensured consistent and appropriate liaison with its stakeholders that may be involved in an emergency. Audit interviews with regional Emergency Coordinators indicated that each person uses his or her own individual approach to liaise with stakeholders. The Board identified that the Emergency Coordinators use various approaches, (some informal and undocumented; others structured and documented) to inform police, fire, hospitals and other stakeholders about the emergency response procedures and the Incident Command System. Additionally, the Board found that each region used its own approach for consultation when developing and updating the emergency procedures documentation. Therefore, Enbridge's continuing education communication program was found to be inconsistent across the company's regions, both in terms of its comprehensiveness and in terms of how the regions perform such communication. Additionally, due to the lack of documentation Enbridge could not demonstrate the adequacy and implementation of its practices.

Summary

The Board found that Enbridge communicated internally and externally with respect to its Emergency Management program throughout its organization as a matter of practice.

The Board found that Enbridge had established a number of formal practices and methodologies to communicate and manage its communication during an emergency.

The Board also found that Enbridge had not established or implemented a communication process that meets the Board's management system process requirements. Additionally, the Board found deficiencies relating to Enbridge's Continuing Education and Liaison requirements.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Compliance Status: Non-Compliant

3.6 Documentation and Document Control

Expectations: The company shall have an established, implemented and effective process for identifying the documents required for the company to meet its obligations to conduct activities in a manner that ensures the safety and security of the public, company employees and the pipeline, and protection of property and the environment. The documents shall include all of the processes and procedures required as part of the company's management system.

The company shall have an established, implemented and effective process for preparing, reviewing, revising and controlling documents, including a process for obtaining approval of the documents by the appropriate authority. The documentation should be reviewed and revised at regular and planned intervals.

Documents shall be revised where changes are required as a result of legal requirements. Documents should be revised immediately where changes may result in significant negative consequences.

References: OPR sections 6.5(1)(i),(n),(o), 6.5(3)

Assessment:

Governance Process for Identifying the Documents Required to Meet its Obligations

This sub-element includes the requirements to develop a process for identifying the documents required for the company to meet its obligations described in OPR section 6.

In the information provided to the Board, Enbridge indicated that its interpretation of the OPR requirements is that the required documents to meet its obligation are "those documents developed as part of the management system required by the OPR". Enbridge further identified that its management system design is comprehensive and encompasses the all of the company's activities that are designed to meet the obligations. As such it indicated that its IMS-01 section 1.3 Integrated Management Structure identifies the documents required. The Board's review of this section indicated that it did not constitute a list of documents or classes/categories of required documents. It was a high level description of the nineteen management systems that comprise Enbridge's management system and high level descriptions of the content of each.

Governance Documentation and Document Control

During the audit, Enbridge was not able to demonstrate that it had established or implemented a governance management system process that meets

the Board's Documentation and Document Control process requirements. Enbridge did not provide a documented management system process until after the Board's closeout discussions. This document was dated 22 August 2014; however, until provided by Enbridge, the Board was not presented evidence of its existence either as a document or as referred to by Enbridge staff during interviews. The Board could not therefore verify its establishment or implementation during the audit.

The Board's review of this document indicated that it did not meet the OPR management system process requirements as described elsewhere in this audit report. As well the Board could not determine the applicability of the process to the programs required in OPR section 55 as the process as written only appears to apply to the governance management system processes.

Regardless of the Enbridge's lack of compliant management system processes, the Board found that Enbridge does have some document control processes that it is presently using on a corporate basis. Enbridge governs its document processes through its *Documents Policy*, which is available on the company's intranet and through an online tool called the Governance Documents Library. The Board identified that the *Documents Policy* and its associated practices and tools set Enbridge's minimum standards for documents and document tracking.

(Note: During its audit the Board noted that Enbridge's Management and Protection Programs are directed by its Governance Management System Processes; therefore, a full review of the Governance Processes and their application at the "program" level follows.)

Emergency Management Program Documentation and Document Control

Document Control

During the audit, Enbridge identified that, at the program level, the Emergency and Security Department program, Book 7 outlined the company's requirements for ensuring complete and accurate documentation of emergency response activities. This included: essential documentation; level 2 emergency documentation; level 3 emergency documentation; and environment, wildlife and negotiations documentation. Additionally, interviews with Enbridge emergency response personnel indicated that the company's *Documents Policy* and its OMS, *Operating and Maintenance Procedures Maintenance Standard* define the company's key document control requirements for its OMMs. No issues were identified with respect to these documents and their associated activities.

Summary

The Board found that, at the program level, Enbridge demonstrated that it had developed document control lists and procedures and practices for managing and controlling its Emergency Management program documents that address many of the OPR requirements.

The Board also found that, at the governance level, Enbridge had developed its new IMS-01, section 4.9 *Governance Document Control Process*, dated 22 August 2014; however, Enbridge did not demonstrate that this process met the OPR requirements or had been established and implemented.

The Board also found that Enbridge did not demonstrate that it had a process for identifying the documents required to meet its obligations under OPR section 6.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Compliance Status: Non-Compliant

4.0 CHECKING AND CORRECTIVE ACTION

4.1 Inspection, Measurement and Monitoring

Expectations: The company shall have an established, implemented and effective process for inspecting and monitoring the company's activities and facilities to evaluate the adequacy and effectiveness of the protection programs and for taking corrective and preventive actions if deficiencies are identified. The evaluation shall include compliance with legal requirements.

The company shall have an established, implemented and effective process for evaluating the adequacy and effectiveness of the company's management system, and for monitoring, measuring and documenting the company's performance in meeting its obligations to perform its activities in a manner that ensures the safety and security of the public, company employees and the pipeline, and protection of property and the environment.

The company shall have an established, maintained and effective data management system for monitoring and analyzing the trends in hazards, incidents and near-misses. The company shall have documentation and records resulting from the inspection and monitoring activities for its programs.

The company management system shall ensure coordination between its protection programs, and the company should integrate the results of its inspection and monitoring activities with other data in its hazard identification and analysis, risk assessments, performance measures and annual management reviews, to ensure continual improvement in meeting the company's obligations for safety, security and protection of the environment.

References: OPR sections 6.1(d), 6.5(1)(g)(s)(u)(v), 56

Assessment:

Governance Inspection, Measurement and Monitoring

The Board requires companies to have an established, implemented and effective process for inspecting and monitoring the company's activities and facilities to evaluate the adequacy and effectiveness of the protection programs and for taking corrective and preventive actions if deficiencies are identified.

Through staff interviews, and document and record review, the Board found that Enbridge has documented its governance management system inspection, measurement and monitoring practices in its IMS-01 manuals. The IMS documents describe Enbridge's process for Health Checks, internal reviews, audits and external audits. The Board completed a full review of the Health Checks, internal reviews, audits and external audits as

part of its evaluation of Enbridge's Internal Audits and Quality Assurance Program and has documented them in Sub-element 4.3 *Internal Audits*, below. The Board has identified deficiencies with the processes and practices that directly relate this sub-element as well. The Board, however, will not assign an additional non-compliance based on that finding within the section. Enbridge's CAP must include corrective actions that ensure that the processes will address the linked requirements within this sub-element explicitly.

Governance Corrective and Preventive Actions

During the audit, Enbridge indicated that its IMS, section 4.6, *Corrective and Preventive Action Management Process* defines the minimum standards for administering, tracking and managing corrective and preventive actions through their implementation and resolution. This process applies to Enbridge departments and addresses events, hazards and near-misses. This process includes Health Checks, internal reviews, regulatory inspections, investigation and audits. The documentation provided at the time of the audit does not show that Enbridge's *Corrective and Preventive Action Management Process* has been fully implemented. Portions of the process, according to the process map, have only been partially implemented at the IMS level.

The Board notes that the requirement to have a process to take corrective and preventive action is included in many of the sub-elements within the Board's audit protocol and the OPR. The Board therefore requires the corrective action plan developed to address the deficiencies identified for this sub-element to explicitly include all sub-element and OPR requirements, where corrective and preventive actions are referenced.

(Note: During its audit the Board noted that Enbridge's Management and Protection Programs are directed by its Governance Management System Processes; therefore, a full review of the Governance Processes and their application at the "program" level follows.)

Emergency Management Program Inspection, Measurement and Monitoring

As noted elsewhere in this report, the Board has found deficiencies with Enbridge's governance management system processes for this sub-element. Enbridge did, however, demonstrate that it had implemented processes and practices to undertake inspections and monitor its activities that apply to its Emergency Response program.

During the audit, Enbridge demonstrated that it had routinely undertaken inspections of its emergency response equipment to check its condition and availability. The Board noted that the process observed during its document and record review supported its overall assessment with respect to Enbridge's lack of a compliant management system process. Interviews with Emergency and Security department personnel and review of emergency documentation indicated that Enbridge did not have defined processes for performing inspections for its Emergency Management Program. Also, Enbridge depended on each region to develop its own local inspection process. The Board's review of inspections performed in

Enbridge's Western, Central and Eastern Regions indicated that the inspections vary depending on the region, the regional field personnel and Emergency Coordinator involved. While no deficiencies were noted during the Board's review of the program level practices, the Board notes that a fully established and implemented, compliant governance process should improve the consistency and quality of the practices applied across the regions.

During the audit, Enbridge indicated that its Emergency Exercises serve to monitor and confirm its emergency response planning and capability.

Enbridge indicated that its OMM Book 7, *Emergency Response*, Subject Number 01-02-03 outlines the company's standards for developing, delivering and tracking emergency management and security exercises. Review of this and other associated documentation and records in Enbridge's head office and regions identified that it had established and implemented formal processes and practices to meet its monitoring requirements.

The Board noted that Enbridge had established a 3 year frequency standard for conducting exercises, drills and tests to monitor the adequacy and effectiveness of its planning, incident command, equipment, notification and training among other things.

Enbridge demonstrated that it had established documented standards for developing, delivering and tracking emergency management and security exercises. Enbridge had developed its *Exercise Design Guide* that provides exercise design and planning direction to its regional staff who are responsible for developing the individual exercises. Enbridge demonstrated that it had established and implemented documented processes and practices that ensure that the exercises are formally evaluated and that learnings and required changes (corrective and preventive actions) are tracked thorough to resolution.

During interviews and through document and records provided during the audit, Enbridge demonstrated that its exercise program and individual exercises are monitored and managed actively by its Emergency and Security departmental staff and all levels of its management structure. As an example, the Board noted that regional managers ensure that the exercises are conducted in accordance with an established *Exercise Design Guide* and also ensure that the emergency exercises include each of the 15 core components identified in its established *PREP Guidelines* at least once during each triennial cycle.

The Board attends company exercises as part of its standard compliance verification activities. The Board has attended Enbridge's exercises, drills and equipment deployments over the last number of years and has had the opportunity to observe Enbridge's practices. No significant issues were noted during the activity reporting reviewed as part of this audit.

Summary

The Board found that, at the program level, Enbridge had established requirements for inspecting and monitoring its activities and facilities. Enbridge demonstrated that it been conducting inspections relating to its Emergency Management program.

The Board also found that Enbridge’s governance level management system processes for undertaking inspections and for taking corrective and preventive actions did not meet the requirements of the OPR.

The Board found that Enbridge had established and implemented an emergency management exercise program to test and monitor it emergency response planning and capabilities.

Based on the Board’s evaluation of Enbridge’s management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Compliance Status: Non-Compliant

4.2 Investigating and Reporting Incidents and Near-misses

Expectations: The company shall have an established, implemented and effective process for reporting on hazards, potential hazards, incidents and near-misses, and for taking corrective and preventive actions. This should include conducting investigations where required or where hazards, potential hazards, incidents and near-misses have or could have resulted in the safety and security of the public, company employees and the pipeline, and protection of property and the environment, being significantly compromised.

The company shall have an established, maintained and effective data management system for monitoring and analyzing the trends in hazards, incidents and near-misses.

The company should integrate the results of its reporting on hazards, potential hazards, incidents and near-misses with other data in hazard identification and analysis, risk assessments, performance measures and annual management reviews, to ensure continual improvement in meeting the company's obligations for safety, security and protection of the environment.

References: OPR sections 6.5(1)(r)(s)(u) (w)(x), 52

Assessment:

Governance Investigating and Reporting Incidents and Near-misses

The Board notes that there is not a specific OPR management system or other process development requirement for investigating incidents or near-misses. The Board, however, considers processes for conducting investigations to be implicit with any process developed to satisfy OPR 6.5 (1)(r) and therefore companies must demonstrate how they develop adequate and effective corrective and preventive actions associated with incidents and near-misses.

Enbridge provided its IMS-01 4.10 Event Investigation Processes, and its IMS-01 4.6 Corrective and Preventive Action Management (CAPA) Process in support of it meeting the requirements of OPR 6.5(1)(r). The Board found that Enbridge's Event investigation Processes were designed in aid of understanding the causes of events from the perspective of root and contributory causes to prevent recurrence within the Enbridge entities to which it is applied. The processes included Event Investigation Principles, Event Impact Criteria and Low and Medium and High Impact Event Investigation Processes. The IMS-01 4.10 processes were documented in detail. Review of the associated process maps indicated that the processes included specific links to the IMS-01, 4.6 CAPA process for assurance of consistent corrective and preventive action development and implementation. Review of the IMS- 01, 4.6 CAPA Process is documented below.

The Board noted that the process maps provided to the Board indicated that the processes had not been full established and implemented at the time of the Board's audit. Regardless of the full implementation of the processes, the Board was able to see evidence of implementation of key investigation process activities within Enbridge's program level activities in its audit activities.

Governance Corrective and Preventive Actions

During the audit, Enbridge indicated that its IMS, section 4.6, *Corrective and Preventive Action Management Process* defines the minimum standards for administering, tracking and managing corrective and preventive actions through their implementation and resolution. This process applies to Enbridge departments and addresses events, hazards and near-misses. This process includes Health Checks, internal reviews, regulatory inspections, investigation and audits. The documentation provided at the time of the audit does not show that Enbridge's *Corrective and Preventive Action Management Process* has been fully implemented. Portions of the process, according to the process map, have only been partially implemented at the IMS level.

The Board notes that the requirement to have a process to take corrective and preventive action is included in many of the sub-elements within the Board's audit protocol and the OPR. The Board therefore requires the corrective action plan developed to address the deficiencies identified for this sub-element to explicitly include all sub-element and OPR requirements, where corrective and preventive actions are referenced.

(Note: During its audit the Board noted that Enbridge's Management and Protection Programs are directed by its Governance Management System Processes; therefore, a full review of the Governance Processes and their application at the "program" level follows.)

Emergency Management Program Incident Reporting

Enbridge's *Emergency Activation Procedures* document defines the company's requirements for assessing and confirming the level of an emergency in order to activate a tiered response. Enbridge was able to demonstrate the establishment and implementation of this process.

Emergency management programs are intended to address incidents and as such rely on the adequacy of other operational management program reporting and investigation processes. The Board concurrently audited Enbridge's safety, integrity, environmental, third-party crossings and public awareness programs. No deficiencies related to program level incident reporting and investigations were noted in those audits. The review of each of the program processes is contained within sub-element 4.2 of the individual program's audit report.

Additionally, Enbridge's *Emergency Activation Procedures* document defines the company's requirements for assessing and confirming the level of an emergency in order to activate a tiered response. Enbridge was able to demonstrate the establishment and implementation of this process.

Summary

As per this and other concurrent operational program audits undertaken by the Board, Enbridge demonstrated it has developed processes for reporting on hazards, potential hazards, incidents and near-misses and conducting investigations as they relate to the Emergency Management program.

The Board also found that, at the governance level, Enbridge's IMS-01, section 4.10 Event Investigation Processes, dated 11-December 2013 had been documented and included in its Governing Policies and Processes Management System manual and that key activities were being implemented

within its programs. These processes were, however, identified as “In Progress” and therefore not established and implemented.

Based on the Board’s evaluation of Enbridge’s management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Compliance Status: Non-Compliant

4.3 Internal Audits

Expectations: The company shall have an established, implemented and effective quality assurance program for its management system and for each protection program, including a process for conducting regular inspections and audits and for taking corrective and preventive actions if deficiencies are identified. The audit process should identify and manage the training and competency requirements for staff carrying out the audits.

The company should integrate the results of its audits with other data in hazard identification and analysis, risk assessment, performance measures and annual management review, to ensure continual improvement in meeting the company's obligations for safety, security and protection of the environment.

References: OPR section 6.5(1)(w)(x)

Assessment:

Governance Quality Assurance Program

During the Board's audit, Enbridge indicated that quality assurance is implicit within a management system, especially within the "Check-Act" elements of the standard "Plan-Do-Check-Act" structure to which it follows. Therefore, Enbridge's indicated that it met the Board's requirements to establish and implement a documented Quality Assurance Program by having a documented, appropriately designed management system that incorporates quality assurance activities.

In reviewing Enbridge's "Check-Act" elements, the Board noted that they do contain a number of activities that would normally be considered quality assurance activities. Examples of these activities are inspections, audits, data trending, monitoring performance measures, etc. Within the limitations of the results of the Board's audit associated with the various sub-elements, the Board was able to view records of the activities being implemented as required.

The Board has found, however, that Enbridge's interpretation of Quality Assurance Program is incorrect. The Board has found that Enbridge has not met its expectations with respect to "programs". The Board has provided clear guidance as part of the guidance notes that accompany the OPR that a program is not simply a description of activities. Programs are: "a documented set of processes and procedures designed to regularly accomplish a result. A program outlines how plans, processes and procedures are linked, and how each one contributes toward the result. Program planning and evaluation are conducted regularly to check that the program is achieving intended results". The Board's definition is included in Section 1.0 *Audit Terminology and Definitions* of the attached audit report.

Governance Internal Audits

Enbridge indicated that its management system includes processes that meet the Board's auditing process requirements. Enbridge indicated that it accounts for the OPR requirements using a combination of its Health Check and Internal Review processes. While not standard in its approach to conducting audits, the Board reviewed Enbridge's practice to determine whether it met the OPR requirements. Additionally, Enbridge indicated that the Board should consider the audits completed as part of its Internal Auditing program activities as part of its demonstration of undertaking the required audits.

The Board found through its review of documentation and records associated with the two referenced processes that they did not individually or together constitute a compliant auditing process. The Board found that both processes were specifically designed not to be exhaustive in their reviews of practice, processes or legal requirements. Further, the Internal Review process had not been fully established or implemented at the time of the audit. Enbridge was in the process of confirming the design of the process by conducting a review of one of its internal processes.

As noted, Enbridge provided a description of its Internal Auditing process and activities as well as selected records of completed audits as a demonstration of completing audits. Review of the Internal Audit process indicated that it was a process designed to be implemented based on corporate risk priorities as directed by Enbridge's senior governance and not a repeatable compliance review process applicable directly to the Board's requirements. Additionally, the audit records did not demonstrate it had conducted audits compliant with OPR sections 53 or 55.

Additionally, Enbridge indicated that it had conducted a number of internal and 3rd party assessments of its management system against its OPR requirements. Review of the associated records provided by Enbridge indicated that they were evaluations of the alignment of Enbridge's management systems with the OPR management system and program requirements and did not evaluate the adequacy and effectiveness or compliance of the company practices.

Based on the Board's review of Enbridge's audit processes, audit activities completed to date and other linked processes such as those related to legal requirements, Enbridge was unable to demonstrate that it had completed audits consistent with section 53 of OPR. Further, the Board finds Enbridge's integrated management system process for conducting audits does not meet the Board's requirements from the perspective of present design and of Enbridge's interpretation of audits.

As noted above, Enbridge's Health Check and Internal Review processes have specific design issues that, when evaluated together, do not meet the Board's audit expectations with respect to comprehensiveness of the required audits. Additionally, the Board finds that Enbridge's interpretation that the OPR audit requirements can be met using a combination of processes conducted over a number years is incorrect. The Board notes that there is a common understanding that an audit is a discrete verification activity that allows for an assessment of conformance/compliance to be made at a given time. The Board notes that the comprehensive audits it requires necessitates evaluation of systems and programs that require evaluation of linked

processes and evaluations of the adequacy and implementation of the system, programs and processes. This requires specific coordination of the reviews in terms of time, processes, programs and regions. Enbridge's present practices, based on its interpretation of the regulations, do not allow for the required assessments to be made. The Board understands that audits often contain a number of different activities; however, each activity is coordinated within the auditing process and scheduled within the individual plan for the audit.

Auditor Training

This sub-element indicates that a company audit process should identify and manage the training and competency requirements for staff carrying out the audits. Enbridge did not demonstrate that its training and competency activities account for staff implementing its audit related processes. The Corrective Action Plan associated with the Board's Non-Compliant finding related to Training and Competency and Evaluation as described in sub-element 3.4 above will need to explicitly address this issue.

Governance Corrective and Preventive Actions Process

The Board's audit process requirements include establishment and implementation of a process for taking corrective and preventive actions to address any deficiencies identified by the audits. As part of its review of the documentation and records provided by Enbridge, the Board reviewed the establishment and implementation Enbridge's corrective and preventive action process. The Board found that Enbridge had developed a Corrective and Preventive Action (CAPA) Management Process and included it within its IMS governance documentation (IMS-01, section 4.6 *Corrective and Preventive Action Management Process*). Review of this governance process indicated that it did not meet the Board's process design requirements as outlined in Section 1.0 *Audit Terminology and Definitions* section of the attached audit report. For example there are no definitions of corrective or preventive actions or appropriate linkages to or from other management system processes. Additionally, the process map indicated that none of the identified steps had been fully implemented. As well, review of the audit records provided indicated that audits conducted over multiple years and on different regions had made identical findings in each audit. This observation brings into question the design and or implementation of Enbridge's preventive action development process. Further, review of auditing activity records supplied by Enbridge as part of the review of this sub-element indicated that corrective actions were not being closed-out consistently or as scheduled or within a reasonable length of time.

The Board notes that the requirement to have a process to take corrective and preventive action is included in many of the sub-elements within the Board's audit protocol and the OPR. The Board therefore requires the corrective action plan developed to address the deficiencies identified for this sub-element to explicitly include all sub-element and OPR requirements, where corrective and preventive actions are referenced.

(Note: During its audit the Board noted that Enbridge's Management and Protection Programs are directed by its Governance Management System Processes; therefore, a full review of the Governance Processes and their application at the "program" level follows.)

Emergency Management Program Quality Assurance Program and Internal Audits.

Quality Assurance Program

As noted above, Enbridge was unable to demonstrate that it has an established, implemented and effective quality assurance program for its management system and emergency management program; however, the company did provide examples of completed audit and review activities and did provide an overview of several inspection programs which are being completed on a regular basis. Specific to the emergency management program, response exercises are utilized for testing the emergency response processes and the capabilities of personnel using emergency response equipment.

Additionally, Enbridge's indicated that its business planning process is a core mechanism for reviewing the effectiveness of its Emergency Management Program. Enbridge demonstrated that its annual business plans are reviewed on a regular basis by senior management that it monitors its performance against its set targets, and its progress in achieving the initiatives. The company identified that corrective actions are taken to address performance issues as necessary.

It was also identified that Enbridge uses the Emergency and Security department dashboard to report on its emergency management program and facilitate improvement. Senior personnel in the Emergency and Security department regularly meet to review metrics against performance expectations, and establish corrective actions as required.

Internal Audits

As noted previously, Enbridge utilizes a combination of its Health Check Process and its Internal Review Process to meet the Board's OPR requirements. The Board found that this process is deficient; however, the Board reviewed Enbridge's audit practices and results to determine whether the company was meeting its audit requirements at a program level. During the audit, Enbridge provided documentation and records relating to its program audit practice. Review of the information provided indicated that Enbridge has had several assessments of its Emergency Management Program. The following are some key examples:

- Emergency Response Capabilities Assessment Report completed by the Response Group, December 2012; and
- Canadian Emergency Response Plan Gap Analysis completed by H2Safety Services Inc., September 2013.

The Board also noted that Enbridge's emergency management program had been subject to an audit. The Board issued Order SO-E101-003-2013 to Enbridge on 10 June 2013. Condition 3 of the Order directed Enbridge to contract an independent third party expert to conduct an audit of its emergency management program. Enbridge was directed to develop and implement a corrective action plan to address any recommendations made by the audit. Enbridge has complied with this request and is in the process of implementing its corrective action plan. Enbridge has therefore met the

OPR requirements with respect to conducting an audit of this program as per section 55.

Review of the information provided by Enbridge indicated that it has not completed an audit consistent with the requirements of section 53 of the OPR. The Board notes that this was a finding of the ordered audit to which Enbridge has already developed an approved corrective action plan. The Board will monitor the implementation of that CAP as per its standard compliance verification processes.

Summary

The Board found that Enbridge demonstrated that it is conducting many of the activities that are normally contained within a quality assurance program on a regular basis. The Board also found deficiencies with Enbridge's Quality Assurance Program from the perspective of definition, design and management.

The Board found that Enbridge had undertaken an audit of the emergency management program consistent with the requirements of section 55 of the OPR. The Board also found that Enbridge had not undertaken an audit consistent with section 53 of the OPR. The Board noted that Enbridge had already developed a Board approved corrective action plan for this issue with a 31 December 2015 completion date.

The Board found deficiencies with respect to the design of Enbridge's management system audit processes.

The Board found that Enbridge had not established and implemented a management system process for taking corrective and preventive actions at both the management system and program levels that meets the OPR requirements. The Board notes that the requirement to have a process to take corrective and preventive action is included in many of the sub-elements within the Board's audit protocol and the OPR. The Board therefore requires the corrective action plan developed to address the deficiencies identified for this sub-element to explicitly include all sub-element and OPR requirements, where corrective and preventive actions are referenced.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Compliance Status: Non-Compliant

4.4 Records Management

Expectations: The company shall have an established, implemented and effective process for generating, retaining, and maintaining records that document the implementation of the management system and its protection programs, and for providing access to those who require them in the course of their duties.

References: OPR section 6.5(1)(p)

Assessment:

Governance Records Management

During the Board's audit, Enbridge provided the Board with a copy of its draft governance Records Management Process. The Board's review indicated that process incorporated its existing practices along with new requirements within it. The Board could not determine the adequacy of the process as some of the referenced Tier 2 and 3 documents were not provided with Enbridge's submission. As well, the Board did not find that the process was established or implemented as it was considered by Enbridge to be in draft format and staff interviewed did not refer to it as a required process during interviews. The Board found that Enbridge has not established or implemented a management system process that meets the OPR requirements. This lack of a compliant management system process, however, is not indicative of a lack of formal records management within Enbridge.

The Board found that, at the time of the audit, Enbridge managed its records according to its Records Management Policy. Based on this policy Enbridge had developed its Records Retention Schedule and Records Development and Sustainment Standard that further guided its records practices. In reviewing these documents, the Board found that Enbridge has established practices for generating, retaining and maintaining its corporate records.

The Board's review of Enbridge's corporate records management practices identified that the company's Records Management department is responsible for developing and maintaining the company's records management requirements and recommended processes, and that its individual department managers are responsible for maintaining and implementing processes and practices at the department level. Department managers develop, maintain and implement departmental records procedures that are aligned with the company's records management requirements. During its audit the Board found that the established requirements and practices were being implemented on a consistent basis and that the existing requirements were incorporated into the draft Records Management Process.

(Note: During its audit the Board noted that Enbridge's Management and Protection Programs are directed by its Governance Management System Processes; therefore, a full review of the Governance Processes and their application at the "program" level follows.)

Emergency Management Program Records Management

The Board identified that, in addition to Enbridge's corporate record management practices, the Emergency and Security department has developed additional requirements applicable to some of its emergency management activities. During the audit, Enbridge indicated that OMM, Book 7 outlines the company's requirements for ensuring that it maintains complete and accurate documentation of its emergency response activities. Review of this documentation indicated that it included a number of types of records that need to be retained. Key examples of records requiring specific retention practices included:

- level 2 emergency documentation;
- level 3 emergency documentation;
- photographs; and
- records of environmental protection, wildlife and negotiations.

The Board identified that Enbridge's emergency response exercises are tracked through an electronic on-line system that can be used to retain the exercise records including lessons learned and track the implementation of corrective actions.

A review of records related to Enbridge's Emergency Management program at several locations indicated that record storage and retention practices varied. Interviews confirmed that the company did not have formal procedures for retaining Emergency Management program records within the regions. The Board, therefore, found that Enbridge's program level records processes had not been established and implemented in a manner consistent with the OPR requirements.

Summary

The Board found that Enbridge had developed a draft governance Records Management Process as part of its Integrated Management System. The Board also found that, due to the draft nature of the process and the lack of Tier 2 and 3 documentation provided during the audit, Enbridge did not demonstrate that it has established and implemented a management system process that meets the OPR requirements.

The Board also found that Enbridge had implemented a consistent records management practice for application across its organization. Enbridge demonstrated that it had developed program specific record management practices for application within its Emergency Management

program; however, the Board found deficiencies with respect to design and implementation.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Compliance Status: Non-Compliant

5.0 MANAGEMENT REVIEW

5.1 Management Review

Expectations: The company shall have an established, implemented and effective process for conducting an annual management review of the management system and each protection program and for ensuring continual improvement in meeting the company's obligations to perform its activities in a manner that ensures the safety and security of the public, company employees and the pipeline, and protection of property and the environment. The management review should include a review of any decisions, actions and commitments which relate to the improvement of the management system and protection programs, and the company's overall performance.

The company shall complete an annual report for the previous calendar year, signed by the accountable officer, that describes the performance of the company's management system in meeting its obligations for safety, security and protection of the environment and the company's achievement of its goals, objectives and targets during that year, as measured by the performance measures developed under the management system and any actions taken during that year to correct deficiencies identified by the Quality Assurance program. The company shall submit to the Board a statement, signed by the accountable officer, no later than April 30 of each year, indicating that it has completed its annual report.

References: OPR sections 6.5(1)(w),(x), 6.6

Assessment:

(The sub-element is attributed to companies' senior management and Accountable Officer; therefore, the Board does not break up its review into governance and program levels).

Annual Management Reviews

IMS-01, section 4.3 outlines the *Management System Review Process* for ensuring that each management system, including IMS-07, is reviewed annually to confirm that the desired results are being achieved.

The Board reviewed the 2012 *Management Review Report* and it demonstrated that Enbridge assesses its Emergency Management Program activities, results and completed improvements. The reports also included a list of planned improvements. Enbridge indicated that an additional process, PC-1801, *Accountable Officer Report Development Process*, is also used to evaluate the management system. The output of the PC-1801 process is the *Annual Report*.

Upon reviewing of Enbridge's processes and records supporting implementation of an annual management review, the Board noted the following:

- IMS-01, *Management System Review Process* is not fully established; as defined by Enbridge standards, all process steps were considered aspirational;
- PC-1801, *Accountable Officer Report Development Process* is not referenced or inferred in IMS-01 or IMS-09, and thus is not integrated into Enbridge's management system;
- PC-1801, *Accountable Officer Report Development Process* is not established as per the Board's working definition (approval date on the document is 21 October 2014); and
- While certain tasks are being reviewed by practice or by exception, the IMS-09 annual review process does not include a review of the implementation of the Integrity Management Program at the operations level.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge has not established and implemented a process for conducting an annual review of its management system and protection program. Enbridge will have to develop corrective actions to address the described deficiencies.

Adequacy and Effectiveness of the Management System

While the Board has listed this requirement under sub-element 4.1 of the Protocol, Enbridge indicated during the audit that its IMS-01, *Management System Review Process* is also used to evaluate the adequacy and effectiveness of the company's management system. When reviewing the content of this governance process, Enbridge indicated that each process within the management system is reviewed to ensure effectiveness.

Enbridge has developed an additional process, PC-1701, *Management System Evaluation Process*. The PC-1701 process includes an evaluation of the adequacy and effectiveness of the overall management system. Records provided to demonstrate implementation of these processes include:

- 2013 Internal Management System Alignment Assessment; and
- 3rd Party Assessment (Dynamic Risk) completed in 2013.

Upon review of the various processes and records supporting the implementation of a process for evaluating the adequacy and effectiveness of the company's management system, the Board noted the following:

- IMS-01, *Management System Review Process* is not fully established; as defined by Enbridge standards, all process steps were considered aspirational;
- IMS-01, *Management Review Process* does not include an evaluation of the adequacy of the management system;
- PC-1701, *Management System Evaluation Process* is not referenced or inferred in IMS-01 or IMS-09, and thus is not integrated into Enbridge's management system;
- *Internal Management System Alignment Assessment* describes assessing adequacy, effectiveness and implementation of processes, but it is based on the OPR requirements and not an evaluation of Enbridge's management system as designed;
- 3rd Party Assessment (Dynamic Risk) is strictly an alignment/compliance assessment to the OPR 6.1-6.6 requirements and does not attest to the adequacy or effectiveness of Enbridge's management system (IMS 01 et al).

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge has not established and implemented a process for evaluating the adequacy and effectiveness of the management system. Enbridge will have to develop corrective actions to address the described deficiencies.

Annual Report

Enbridge develops an *Annual Accountable Officer Report* that describes the performance of the company's management system in meeting its obligations for safety, security and protection of the environment. The report also describes the company's performance in achieving its goals, objectives and targets during that year. The company's performance is evaluated against the performance measures developed under the management system and any actions taken that year to correct deficiencies identified by the quality assurance program. The PC-1801, *Accountable Officer Report Development Process* describes the required process for developing the *Annual Accountable Officer Report*. According to this process, the *Annual Accountable Officer Report* must "detail the performance of Enbridge LP management system and will cover areas of leadership, performance measures, internal review, management review and corrective actions taken." The report must also include details about achievement of goals, objectives and targets during that year as assessed through performance measures.

According to the PC-1801, *Accountable Officer Report Development Process*, Enbridge must complete its *Annual Accountable Officer Report*, have it signed by the accountable officer, and submit it to the Board no later than April 30 of each year. The Board confirmed that the *Annual Accountable Officer Report* for the 2013 performance year was signed by the accountable officer and submitted to the Board by April 30, 2014.

Upon review of the *Annual Report*, the Board noted that the report does reference some internal and external reviews conducted on the management system. The *Annual Report* also includes a section that describes the actions taken that year to address deficiencies. However, Enbridge's *Annual Report* does not specify the deficiencies and actions items, and does not focus on the development and status of the management system. While it is important to communicate this information to the accountable officer, it is not fully representative of the Board's Quality Assurance program requirement (see sub-element 4.3). Thus, it is unclear whether the accountable officer is aware of the actions taken that year to address deficiencies identified by the Quality Assurance program. The Board also noted that the deficiencies identified in sub-elements 1.2 and 2.3 will need to be addressed in future annual reports.

Management Responsibility

Further to the review of these processes and activities, the Board notes that Enbridge has not conducted compliance audits consistent with its OPR obligations. The Board views the responsibility for undertaking these audits as resting with the company's senior management (as represented by its Accountable Officer) as the annual report developed as per OPR specifically requires review and reporting on aspects of the Quality Assurance program (specifically including audits) and performance of the management system in meeting its obligations under OPR section 6. Additionally, the Board has made Non-Compliant findings related Sub-elements *1.2 Policy and Commitment Statements and 2.3 Goals, Objectives and Targets* that relate to the development of explicit policies and goals required by the OPR. While the Board's Non-Compliant findings are mitigated by the nature of the deficiencies (implicit inclusion vs. explicit requirements with respect to policies) and the existing, Board approved corrective action plan with respect to the compliance audits, it is the responsibility of company management to ensure the development and implementation of compliant policies and goals that guide the company's management system and programs.

Summary

The Board found that Enbridge had developed processes for and undertaken activities relating to its Management Review responsibilities.

The Board also found that Enbridge's processes did not meet all of the requirements outlined in the OPR.

The Board has found that Enbridge has not conducted audits consistent with the requirements of OPR section 53; however, Enbridge has developed a Board approved corrective action plan to address this issue.

The Board also found that some of the Non-Compliant findings in this audit are related to sub-elements where Enbridge's Senior Management have

responsibilities to ensure that management direction, oversight and formal monitoring are occurring.

Based on the Board's evaluation of Enbridge's management system and Emergency Management program against the requirements, the Board has determined that Enbridge is Non-Compliant with this sub-element. Enbridge will have to develop corrective actions to address the described deficiencies.

Compliance Status: Non-Compliant

ⁱThe "References" in this table contain specific examples of the legal requirements applicable to each element but are not exhaustive and do not represent a complete list of all applicable legal requirements audited to, which are found within the NEB Act and its associated regulations, as well as other applicable legislation, technical and other standards including the *Canada Labour Code* and CSA Z662, and any conditions contained within applicable certificates or orders enforced by the Board.

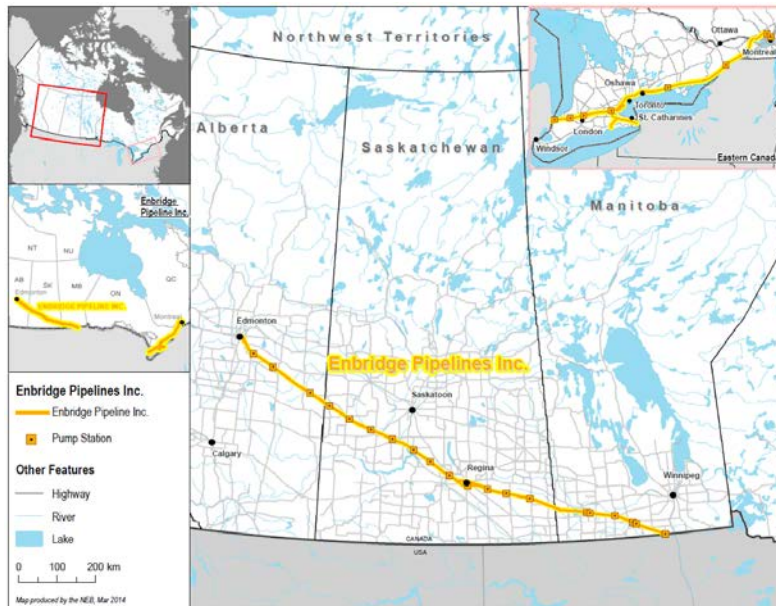
APPENDIX II
ENBRIDGE PIPELINES INC.
MAPS AND SYSTEM DESCRIPTIONS

Enbridge Pipelines Inc. and its subsidiaries included in the scope of this audit included specifically:

- Enbridge Pipelines Inc.;
- Enbridge Bakken Pipeline Company Inc. on behalf of Enbridge Bakken Pipeline Limited Partnership;
- Enbridge Southern Lights GP Inc. on behalf of Enbridge Southern Lights LP;
- Enbridge Pipelines (NW) Inc.; and
- Enbridge Pipelines (Westspur) Inc.

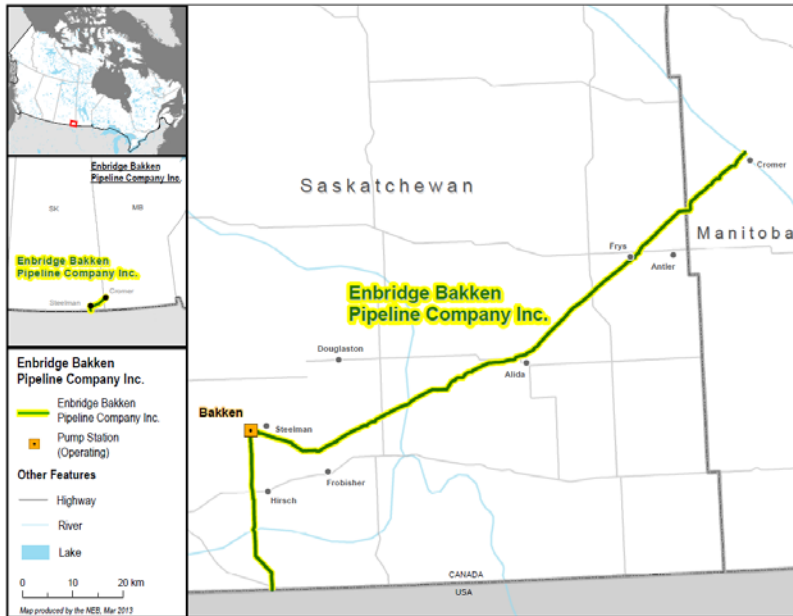
These subsidiaries hold the certificates for Enbridge’s NEB-regulated facilities.

Figure 1: Enbridge Pipelines Inc.



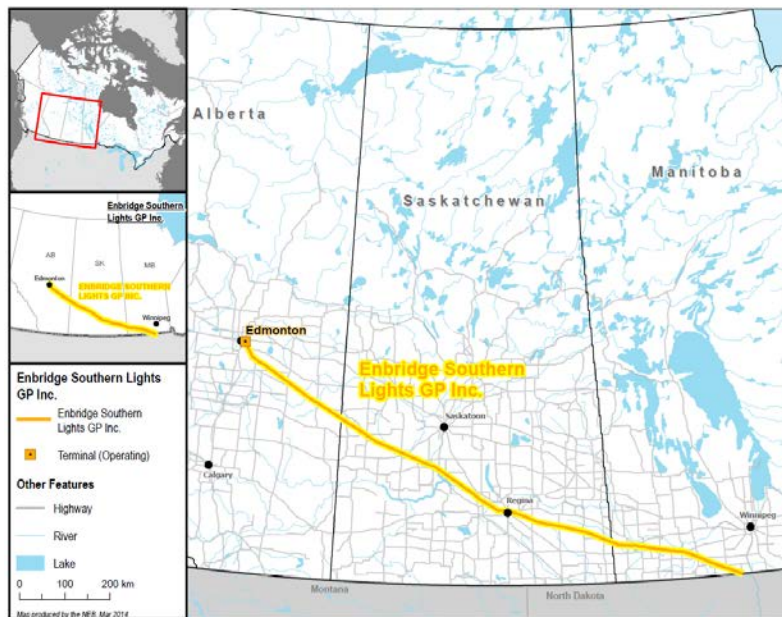
The Enbridge pipeline system, shown in Figure 1, is 7,747.04 km of oil pipelines that extend from Edmonton, Alberta, to Montréal, Québec, connecting with other oil pipelines in the United States at the Manitoba/North Dakota and Michigan/Sarnia Ontario borders.

Figure 2: Enbridge Bakken Pipeline Company Inc.



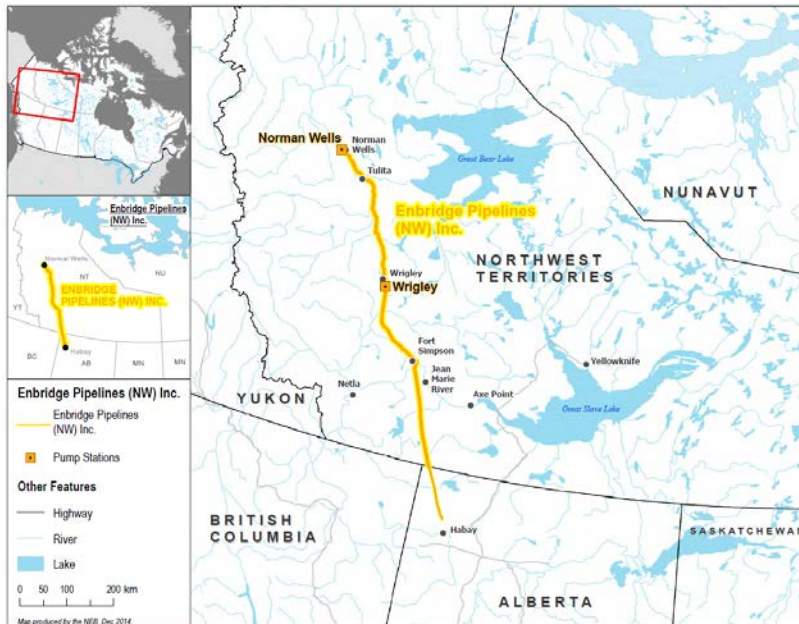
The Enbridge Bakken pipeline, shown in Figure 2, is a 157.28 km pipeline that transports oil from Cromer, Manitoba to the Saskatchewan/North Dakota border. The Enbridge Bakken pipeline continues into the United States.

Figure 3: Enbridge Southern Lights GP. Inc



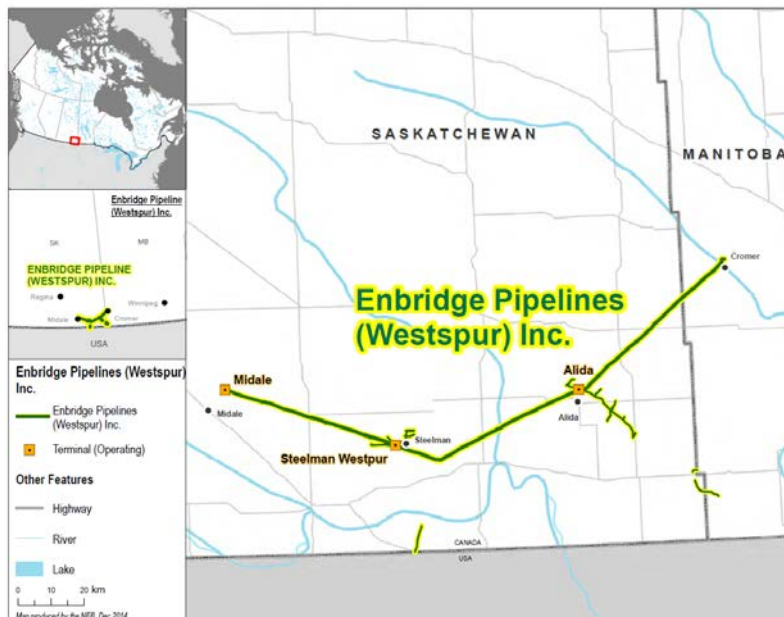
The Enbridge Southern Lights pipeline, shown in Figure 3, is a 1,529.75 km pipeline that transports oil from Edmonton Alberta to the Manitoba/North Dakota border. The Enbridge Southern Lights pipeline continues into the United States.

Figure 4: Enbridge Pipelines (NW) Inc.



The Enbridge (NW) pipeline, shown in Figure 4, is a 854.65 km pipeline that transports oil from Norman Wells, Northwest Territories into Northern Alberta.

Figure 5: Enbridge Pipelines (Westspur) Inc.



The Enbridge Westspur pipeline, shown in Figure 5, is a 483.33 km pipeline that transports oil and gas from Midale Saskatchewan to Cromer Manitoba.

APPENDIX III
ENBRIDGE PIPELINES INC.
COMPANY REPRESENTATIVES INTERVIEWED
EMERGENCY MANAGEMENT PROGRAM

Company Representative Interviewed	Job Title
[REDACTED]	Director Leadership & LS
[REDACTED]	Director HR Business Support
[REDACTED]	Emergency Response Plans Team Lead
[REDACTED]	Emergency Management Project Specialist
[REDACTED]	Safety Coordinator
[REDACTED]	S.M.T
[REDACTED]	Senior Director RCIM
[REDACTED]	EIT Pipeline Compliance
[REDACTED]	Electrical Maintenance
[REDACTED]	Compliance Engineer
[REDACTED]	Supervisor PLM Services
[REDACTED]	Safety Coordinator
[REDACTED]	Microprocessor Coordinator
[REDACTED]	PLM
[REDACTED]	Operations Coordinator Cromer Area
[REDACTED]	Manager Pipeline Compliance
Dale Burgess	Vice President Canadian Operations
[REDACTED]	Manager RINI

██████████	Supervisor Engineering
██████████	Compliance Coordinator
██████████	Emergency Response Coordinator
██████████	Director
██████████	Manager RS&D
██████████	Senior Engineer
██████████	Supervisor PLM Services
██████████	Manager Emergency Management
██████████	Supervisor Compliance RCIM
██████████	Manager Learning Solutions
██████████	Senior Mechanical Technician
██████████	Manager Media Relations
██████████	Manager Emergency Preparedness
██████████	Manager RS&D
██████████	Sr. Electrical Technician
██████████	Internal Audit Manger
██████████	Sr. Electrical Technician
██████████	S.M.T
██████████	Administrative Assistant III ESM
██████████	Senior Mechanic
██████████	S.M.T
██████████	Sr. Mechanical Technician
██████████	Leader OMM Management

██████████	Director, Eastern Region
██████████████████	Coordinator Maintenance Services - Sarnia
██████████████	Operations Training Supervisor
██████████	Manager Edmonton
██████████	PLM
██████████	Director EPSI
██████████████	Kerrobot PLM
██████████	Leader Internal Coms (LP)
██████████	Emergency Response Coordinator
██████████	Senior Manager Risk Management
██████████	Senior Manager O&M Service
██████████████	Manager Regional Support
██████████	Compliance Coordinator
██████████	Supervisor P/L Services
██████████	Manager Reg. Services
██████████	Manager RSS
██████████	Training Coordinator
██████████	PLM Supervisor
██████████	Community Relation Specialist
██████████████	Ethics and Compliance Officer
██████████████	Manager Integrated Management Governance
██████████	Director Central Region
██████████	Area Operations Manager

[REDACTED]	Kerrobot PLM
[REDACTED]	Advisor LP H&S
[REDACTED]	Sr. Mechanical Technician
[REDACTED]	Manager Area Operations
[REDACTED]	PLM QMS Manager
[REDACTED]	Senior Mech. Technologist
[REDACTED]	PC Analyst
[REDACTED]	Area Supervisor
[REDACTED]	PLM Services – Westover
[REDACTED]	Senior Manager Strategic Planning
[REDACTED]	PLM
[REDACTED]	Senior Manager Health and Safety Canada
[REDACTED]	Manager Communications Enterprise
[REDACTED]	Senior Manager Compliance
[REDACTED]	Emergency Response Coordinator
[REDACTED]	PLM Services – Westover
[REDACTED]	Director Environment
[REDACTED]	Senior Manager ESM
[REDACTED]	Senior Compliance Specialist
[REDACTED]	Senior Integrity Engineer
[REDACTED]	Senior Manager Integrated Management
[REDACTED]	Sarnia Operations
[REDACTED]	Senior Manager Regional Services

██████████	Safety Coordinator
██████████	PLM Supervisor
██████████	Senior Emergency Response Plans Analyst
██████████	Hardisty Maintenance Coordinator
██████████	Pipeline Integrity
██████████	Kerrobert PLM
██████████	PLM

APPENDIX IV
ENBRIDGE PIPELINES INC.
DOCUMENTS REVIEWED* – EMERGENCY MANAGEMENT PROGRAM

NAME
2014 Audit IR Response Status Check_041014
2014 Eastern Helicopter Planning Schedule
2014 NEB Audit - All Asset Registry - Eastern Region
2014 NEB Audit - All Asset Registry - EPSI Region
2014 NEB Audit - All Asset Registry - Northern Region
2014 NEB Audit - All Asset Registry - Western Region
2014 NEB Audit - Asset Registry - Central Region
2014 NEB Audit - Central Region Org Chart
2014 NEB Audit - Central Region PSV's
2014 NEB Audit - Central Region Stations and Terminals
2014 NEB Audit - Eastern Region Org Chart
2014 NEB Audit - Pipe Asset Registry - Central Region
2014 NEB Audit - Pipe Asset Registry - Eastern Region
2014 NEB Audit - Pipe Asset Registry - EPSI Region
2014 NEB Audit - Pipe Asset Registry - Northern Region
2014 NEB Audit - Pipe Asset Registry - Western Region
2014 NEB Audit -Eastern Region PSV's
2014 NEB Audit -Eastern Region Stations and Terminals
2014 NEB Audit -EPSI PSV's
2014 NEB Audit -EPSI Region Org Chart
2014 NEB Audit -EPSI Stations and Terminals
2014 NEB Audit -Field Operations Services Org Chart
2014 NEB Audit -Northern Region Org Chart
2014 NEB Audit -Northern Region PSV's
2014 NEB Audit -Northern Region Stations and Terminals
2014 NEB Audit -Northern Region Sump Tanks
2014 NEB Audit -Western Region Org Chart
2014 NEB Audit -Western Region PSV's
2014 NEB Audit -Western Region Stations and Terminals
2014 NEB Audit -Western Region Sump Tanks
2014 NEB Audit_ESM Focus Area _Planning Meeting_vF.3
4.4 GV D Email Management Policy V01

* Document titles are shown as presented in the electronic portal from Enbridge Pipelines Inc.

4.4 GV D Records Discovery Policy V01
4.4 GV D Records Management Policy V01
4.4 GV D Records Retention Schedule V01
4.4 GV D Retention Schedule Development Sustainment Standard V01
4.4_GV_Documents and Records Summary
6 4c_2014 Evaluation of Need
6 5 1g and h_Legal Requirements
Att EM 1 - 6.5 1 (a) - Objectives Implementation in Regions
Att EM 2 - Minutes Quarterly ESM Enviro Meeting July 15 2014
Att EM 3 - HSE Support Services Mandate 5 26 14
Att EM 4 - ER Mitigation projects 2012 v1
Att EM 5 - LP Risk Management Dispersion modeling presentation
Att EM 6 - ESM Management of Change Form
Att EM 7 - Screen Shot of ER Plans Change Management Tracking
Att EM 8 - TSB MOC 2014-36 Form
Att EM 9 - 6.5 1 u - EM Program Inspections
Att GV 2 - Inventory of Hazards and Potential Hazards
Att GV 3 - Identifying and Communicating Legal Requirements
Att GV 4 - Field Operations Training Update
Att GV 5 - Interim Training Verification Solution (Electrical Role)
Att GV 6 - Process for Developing Competency and Training Program
Canadian ER Plans (ICP development) Email to Regional Dir V1.0
Central Region Equipment Deployment Feb 26 2014
Central Region Equipment Deployment Jan 18 2014_Redacted
egret-export-2014-08-12_08-43-49-AM(1)
egret-export-2014-08-12_08-44-59-AM(1)
Emergency Management Program - Supplemental Information
Emergency Response and Security Regional 3 Year Plan - 2014
Employee Type by Region
Enbridge Assets by NEB Entity
Enbridge Final Responses to close-out discussion
Enbridge Mainline Patrols_Western, Central and Northern
ER 2 1 Documents and Records Summary
ER 2 1 Response to NEB IR No 1
ER 2 2 Documents and Records Summary
ER 2 2 Response to NEB IR No 1
ER 2.2 D 2013_04_30_ICP_Gap_Analysis RFP_v1_H2Safety
ER 2.2 D Canadian Gap Analysis Summary Tables
ER 2.2 D Enbridge Canadian ER Plan Gap Analysis
ER 2.2 R 2014_04_23_M Uncontrolled Copy of IMS07_vF
ER 2.3 R Emergency and Security Management 2013 Department Plan
ER 2.3 R Emergency and Security Management 2014 Department Plan

ER 3.1 D Control Point Mapping Site Sheet Template_v1
ER 3.1 D Don River Tactical Response Plan V1.0
ER 3.1 D Edmonton Terminal Pre-Fire Plan V1.0
ER 3.1 D Enbridge Inland Tactical Response Guide Draft V0.5
ER 3.1 D EPSI System Pre-Fire Plan V1.0
ER 3.1 D ER Equipment Purchasing Process for Additional ORM Funds_Last Revised April 13th 2012
ER 3.1 D ER Equipment Recommendations_v2
ER 3.1 D Incident Management Handbook V1.0
ER 3.1 D LP Security Management Plan V1.0
ER 3.1 D Maintenance Procedures Management System Document
ER 3.1 D OMM BK 7 Version 11
ER 3.1 D Pipestone Creek Tactical Response Plan V1.0(S)
ER 3.1 D Sarnia Terminal Pre-Fire Plan V1.0
ER 3.1 D St Clair Tactical Response Plan V1.0(S)
ER 3.1 Documents and Records Summary
ER 3.1 R 12.05.08_ ER Equipment Meeting Minutes_vF
ER 3.1 R 12.05.29_ ER Equipment Meeting Minutes_vF
ER 3.1 R 12.06.07_ ER Equipment Meeting Minutes_vF
ER 3.1 R AnnualUpdate Bk7 V10 2013-04-15 MEMO
ER 3.1 R AnnualUpdate Bk7 V11 2013-12-15 MEMO
ER 3.1 R CriticalUpdate Bk7 V9 2012-06-15 Rev12-01 MEMO
ER 3.1 R CriticalUpdate Bk7 V9 2012-11-29 REV12-XX MEMO
ER 3.1 R CriticalUpdate Bk7 V9 2013-12-31 REV12-13 MEMO
ER 3.1 R Emergency Response Advisory Team Meeting Miniutes-June 2013
ER 3.1 R Emergency Response Advisory Team Meeting-Nov12
ER 3.1 R ER Bulletin- 01-2012 Underflow Culvert Weir Dams
ER 3.1 R ER Bulletin- 01-2013 Incident Command Post Kits
ER 3.1 R ER Bulletin- 02-2012 Incident Organization Wall Chart
ER 3.1 R ER Bulletin- 02-2014 CEPA Mutual Aid Agreement
ER 3.1 R ER Bulletin- 03-2013 Integrated Contingency Plan (ICP)
ER 3.1 R ER Bulletin- 05-2013 Wildlife Kits
ER 3.1 R ER Bulletin-ICP Rollout-February 2013 V1.0
ER 3.1 R ER Bulletin-ICS Training, October 2013 V1.0
ER 3.1 R Revision Process At-A-Glance OMM
ER 3.1 R Security Incident Advisory-April 2013 V1.0
ER 3.1 R Security Incident Advisory-Novemeber 2012 V1.0
ER 3.1 R Security Incident Advisory-September 2013 V1.0
ER 3.1 R TRP_Active Status_Distribution List_June 25
ER 3.2 D Book 7 - Part II - Eastern Region
ER 3.2 D Edmonton Terminal Pre-Fire Plan V1.0
ER 3.2 D Enbridge Crisis Management Plan V1.0
ER 3.2 D EPSI System Pre-Fire Plan V1.0

ER 3.2 D ICP DRAFT A1 Eastern Region V1.0
ER 3.2 D ICP DRAFT A2 Eastern Region V1.0
ER 3.2 D ICP DRAFT A3 Eastern Region V1.0
ER 3.2 D ICP DRAFT A4 Eastern Region V1.0
ER 3.2 D ICP DRAFT A5 Eastern Region V1.0
ER 3.2 D ICP DRAFT A6 Eastern Region V1.0
ER 3.2 D ICP DRAFT S1 Eastern Region V1.0
ER 3.2 D ICP DRAFT S2 Eastern Region V1.0
ER 3.2 D ICP DRAFT S3 Eastern Region V1.0
ER 3.2 D ICP DRAFT S4 Eastern Region V1.0
ER 3.2 D Incident Management Handbook V1.0
ER 3.2 D Maintenance Procedures Management System
ER 3.2 D OMM BK 7 Version 11
ER 3.2 R Agenda For Line 9 ERP Project V1.0
ER 3.2 R CAN ICP development timeline 2014 v3
ER 3.2 R Eastern Region ICP Overview L9 V1.0
ER 3.2 R ERATQ4 ICP Meeting Minutes ICP V1.0
ER 3.2 R ICP Kick Off Meeting ERAT Q2 2013 V1.0
ER 3.2 R ICP Update Meeting V1.0
ER 3.2 R ICP Update_ERAT_V1.0
ER 3.4 D B7 01-02-03 Emergency-Security Exercises CAN
ER 3.4 D B7 01-02-04 Emergency Response Training Matrix CAN
ER 3.4 D E SM Course syllabi vf
ER 3.4 D ICS Role Specific Training Material V1.0(S)
ER 3.4 D IMS 07 Emergency and Security Management System V1.0
ER 3.4 R CriticalUpdate_Bk7_V9_2014-05-01_REV14-01_MEMO
ER 3.4 R ICS Position Specific Handout
ER 3.4 R ICS PRO registration deskdrop 7.5x5 v5
ER 3.4 R OMM NOTIFICATION_CRITICAL UPDATE_Book 7_Emergency Response - CAN
ER 3.5 D B1 03-02-02 Public Awareness Program CAN
ER 3.5 D B7 02-02-06 Public Relations CAN
ER 3.5 D B7 02-02-07 Impacted Landowners-Tenants CAN
ER 3.5 D B7 02-02-08 Emergency Communications CAN
ER 3.5 R ER Bulletin- 01-2012 Underflow Culvert Weir Dams
ER 3.5 R ER Bulletin- 01-2013 Incident Command Post Kits
ER 3.5 R ER Bulletin- 02-2012 Incident Organization Wall Chart
ER 3.5 R ER Bulletin- 02-2014 CEPA Mutual Aid Agreement
ER 3.5 R ER Bulletin- 05-2013 Wildlife Kits
ER 3.5 R ER Bulletin-ICP Rollout-February 2013 V1.0
ER 3.5 R ER Bulletin-ICS Training, October 2013 V1.0
ER 4 1 Documents and Records Summary
ER 4 1 Response to NEB IR No 1

ER 4.1 D 2012_07_23_ER Capability Project Plan_Rev2
ER 4.1 D 2013_04_30_ICP_Gap_Analysis RFP_v1_H2Safety
ER 4.1 D Assessment Checklist
ER 4.1 D Canadian Gap Analysis Summary Tables
ER 4.1 D Enbridge Canadian ER Plan Gap Analysis
ER 4.1 D Enbridge ER Capabilities Assessment Report
ER 4.1 R 2012-11-29 EPI and EPSI Emergency Procedures Manual Review Response
ER 4.1 R 2014 ER Capability Action Plan v2 April Update
ER 4.1 R CRITICAL UPDATE REQUIRED for NEB Self Assessment, Book 7
ER 4.1 R Lakehead plan Department deliverables-2014 update
ER Equipment Check April 2014
ER Equipment Check June July 2014
ER Equipment Check March 2014
ER_2_3_R_Concordance Table - Updated Emergency Management Information
ER_2_3_R_Emergency and Security Management 2014 Work Plan
ER_2.1_D_Book7_02-02-01_Emergency Notification_CAN
ER_2.1_D_Don River Tactical Response Plan_V1.0
ER_2.1_D_Edmonton Terminal Pre-Fire Plan_V1.0
ER_2.1_D_IMS 07 Emergency and Security Management System_V1.0
ER_2.2_D_2014_02_10_IMS07 Legal Requirements
ER_2.2_D_Draft Directive 071 letter
ER_2.2_D_Draft Directive 71 Feedback form
ER_2.2_D_IMS 07 Compliance Register_2014_03_14
ER_2.2_Enbridge E2 Submission_FILED April 14
ER_2.2_R_Meeting 1 - Directive 071 - 7 Jan 2013
ER_2.2_R_Meeting 1 - E2 Consultation Kickoff - 13 Dec 2013
ER_2.2_R_Meeting 2 - E2 - Placeholder to further discuss (TBD 23 Jan 2014)
ER_2.2_R_Meeting 2- Directive 071 - 9 Jan 2013
ER_2.2_R_Meeting 3- Directive 071 - 10 Jan 2013
ER_2.2_R_PREP Guidelines meeting minutes 041114
ER_2.2_R_PREP Guidelines meeting minutes 042414
ER_2.3_R_2013 Dept Plan Emergency and Security Management_V1 0
ER_2.3_R_Emergency and Security Management 2014 Work Plan
ER_2.3_R_Emergency and Security Management 2014 Work Plan Other Initiatives
ER_2.4_D_2013 E3RT Terms of Reference - VER_4
ER_2.4_D_ERAT Terms of Reference_V1.0
ER_2.4_D_JBUCERC Terms of Reference_V1.0
ER_2.4_R_11.11.29 ERAT Meeting Minutes_V1.0
ER_2.4_R_11.11.29_ERAT Agenda
ER_2.4_R_12.11.28 ERAT Meeting Minutes_V1.0
ER_2.4_R_12.11.28_ERAT Action Items
ER_2.4_R_12.11.28_ERAT Agenda

ER_2.4_R_13.06.18 ERAT Meeting Minutes_V1.0
ER_2.4_R_13.06.18_ERAT Agenda
ER_2.4_R_2013_03_05_ERAT Meeting Minutes_V1.0
ER_2.4_R_2013_03_05_ERAT Agenda Mar 5_6 2013
ER_2.4_R_2013_09_19_Action Items_ERAT_Sept2013_EM_JM_v01
ER_2.4_R_2013_09_19_Minutes_ERAT Sept2013_EM_JM_v01
ER_2.4_R_2014 Job Profile - Emergency Management Systems Specialist
ER_2.4_R_2014 Position Approval Request Form - EM Systems Specialist
ER_2.4_R_ER Steering committee Minutes Aug 3 2011_V1.0
ER_2.4_R_ERAT - NEB Audit Record
ER_2.4_R_JBUCERC Apr 23 2014 Agenda
ER_2.4_R_JBUCERC EM Metrics
ER_2.4_R_JBUCERC Q12014 Meeting Minutesv4
ER_2.4_R_JBUCERC Q22014 Meeting Minutesv1
ER_2.4_R_Position Request for Review - EM Systems Specialist
ER_3.1_D_Guide A - All Construction Projects_V01
ER_3.1_D_Guide B - Changes to Tankage or Product_v01
ER_3.1_D_Guide C - Changes to Facility New or Existing_v1
ER_3.1_D_Guide D - Changes to Pipeline New or Existing_v1
ER_3.1_D_IMS 07 Emergency and Security Management System
ER_3.1_D_LP PIPEM - PIPEM Checklist - v1
ER_3.1_D_LP Project Integration Program for Emergency Management Standard
ER_3.1_D_PIPEM Update Form_v1
ER_3.1_D_PIPEM Workflow 001 - ESM Contact - Under Revision
ER_3.1_D_PIPEM Workflow 002 - Project Contact
ER_3.1_D_PIPEM Workflow 003 - Regional Contact
ER_3.1_IMS-01 Governing Policies and Process
ER_3.1_R_PIPEM Checklist for South Edmonton Terminal Step 1 and 2 - DRAFT
ER_3.1_R_TRP_Active Status_Distribution List_V1.0
ER_3.1_Response to NEB IR No 1
ER_3.2_D_Don River Tactical Response Plan_V1.0
ER_3.2_D_Pipestone Creek Tactical Response Plan_V1.0
ER_3.2_D_Sarnia Terminal Pre-Fire Plan_V1.0
ER_3.2_Documents and Records Summary
ER_3.2_R_Control Point Map Example
ER_3.2_R_CPM Data Sheet Sample
ER_3.2_Response to NEB IR No 1
ER_3.3_D_PIPEM Communications and Training Plan Revision 3
ER_3.3_D_PIPEM Guidelines 001 - ESM Contact - Under Revision
ER_3.3_D_PIPEM Guidelines 002 - Project Contact
ER_3.3_D_PIPEM Guidelines 003 - Regional Contact
ER_3.3_R_ER Bulletin-03-2014 PIPEM_v01

ER_3.3_R_Meeting Notice - MP Focus Group in PIPEM Development_V01
ER_3.3_R_Meeting Notice - MP General Awareness Session_V01
ER_3.3_R_Meeting Notice - MP Kickoff
ER_3.3_R_Meeting NOtice - MP Project Contact Training_V01
ER_3.3_R_Meeting Notice - Project Contact Q&A 1
ER_3.3_R_Meeting Notice - Project Contact Q&A 2
ER_3.3_R_Meeting Notice - Regional Contact Awareness and Training Session Central_V01
ER_3.3_R_Meeting Notice - Senior Management Approval of PIPEM
ER_3.3_R_Meeting Notice - Stakeholder Engagement Compliance
ER_3.3_R_Meeting Notice - Stakeholder Engagement Environment
ER_3.3_R_Meeting Notice - Stakeholder Engagement ESM
ER_3.3_R_Meeting Notice - Stakeholder Engagement Risk
ER_3.3_R_PIPEM Quick Reference Card (11x17-Print and Fold)
ER_3.4_D_Emergency and Security Management Exercise Design Guide
ER_3.4_Document and Record Summary
ER_3.4_R_elms ICS 100200 Report 2011-2014_V1.0
ER_3.4_R_TRAC CAN Western Tank Fire Report_V1.0
ER_3.4_R_TRG ICS School Letter_V1.0
ER_3.4_Response to NEB IR No 1
ER_3.5_Documents and Records Summary
ER_3.5_Response to NEB IR No 1
ER_3.6_D_Governance Document Library - Guidance Notes for ESM_V1.0
ER_3.6_R_ER Bulletin-05-2014 GDL_V1.0
ER_4.1_D_AAM Instructions_vF
ER_4.1_D_AAR-IP Agenda
ER_4.1_D_Enbridge Exercise Evaluation Guide
ER_4.1_D_Exercise_AAR_Template_vF
ER_4.1_D_Hot Wash Agenda
ER_4.1_D_Incident_AAR_Template_vF
ER_4.1_D_Participant Feedback Form
ER_4.1_IMS 07 Emergency and Security Management System_V1.0
ER_D_IMS 07 Emergency and Security Management System_V1.0
ex and trg concept
Final Report -Emergency Excavation Table Top - March 18 2014
GV 1 2 Documents and Records Summary
GV 1.2 D IMS 01 Governing Policies and Processes
GV 1.2 Response to NEB IR No 1
GV 2 3 Response to NEB IR No 1
GV 2.1 D IMS-01 Governing Policies and Processes V1.0
GV 2.1 D LP Mainline Risk Modeling Presentation - 3-28-2014
GV 2.1 Documents and Records Summary
GV 2.1 Response to NEB IR No 1

GV 2.2 D IMS-01 Governing Policies and Processes V1.0
GV 2.2 D IMS-02 Compliance and Ethics Management System V1.0
GV 2.2 Documents and Records Summary
GV 2.2 R Legal Updates elink page V1.0
GV 2.3 D IMS-01 Governing Policies Processes
GV 2.4 Document and Records Summary
GV 2.4 Response to NEB IR No. 1
GV 3 3 Response to NEB IR No 1
GV 3 5 Response to NEB IR No 1
GV 3.3 D OMS Appendix IV Change Management Process V01
GV 3.3 D OMS Operating-Maintenance Procedures Management Standard Document V01
GV 3.3 D OMS Operating-Maintenance Procedures Management System Document V01
GV 3.3 R CriticalUpdate Bk7 V9 2013-12-31 REV12-13 MEMO V01
GV 3.3 R Deviation B3 06-03-20 CAN 2012-09-14 V01
GV 3.4 HR - Response to NEB IR No. 1
GV 3.4 HR Documents and Records Summary
GV 3.4 OPS - Documents and Record Metadata Table
GV 3.4 OPS - Response to NEB IR No. 1
GV 3.5 Documents and Records Summary
GV 3.6 D Document Owner-Stakeholder List V01
GV 3.6 R Annual Review Schedule V01
GV 3.6 R Annual Update Bk7 V9 2011-12-01 MEMO V01
GV 3.6 R BOOK 7 Change Markups 2013-12-15 V01
GV 3.6 R CriticalUpdate Bk7 V9 2013-12-31 REV12-13 MEMO V01
GV 3.6 R FORM-B0-D-001_DEVIAION REQUEST FORM
GV 3.6 Response to NEB IR No 1
GV 4 1 Response to NEB IR No 1
GV 4.1 D IMS 01 Governing Policies and Processes
GV 4.3 D 1. Cover
GV 4.3 D 2. Table of Contents
GV 4.3 D Chapter 1 Who We Are
GV 4.3 D Chapter 2 Introduction to Paisley GRC
GV 4.3 D Chapter 3 Audit Plan Development
GV 4.3 D Chapter 4 Audit Planning Engagement Phase
GV 4.3 D Chapter 5 Audit Program and Fieldwork
GV 4.3 D Chapter 6 Document Review and Approval
GV 4.3 D Chapter 7 Audit Report and Close
GV 4.3 D Chapter 8 Condition Tracking and Action Plans
GV 4.3 D Chapter 9 Time Reporting and Audit Administration
GV 4.3 D IMS 01 Governing Policies and Processes
GV 4.3 D PC-1001 Internal Stakeholder Department Reviews Procedure
GV 4.3 D PC-1003 Integrated Review Practice

GV 5 0 Document and Record Summary
GV 5 0 Response to NEB IR No 1
GV 5.0 D IMS 01 Governing Policies and Processes
GV_1. 1_Documents and Records Summary
GV_1.1_R_2014 03 31 Letter to NEB Accountable Officer - Enbridge Bakken Pipeline Company Inc
GV_1.1_R_2014 03 31 Letter to NEB Accountable Officer - Enbridge Inc
GV_1.1_R_2014 03 31 Letter to NEB Accountable Officer - Enbridge Pipelines (NW) Inc
GV_1.1_R_2014 03 31 Letter to NEB Accountable Officer - Enbridge Pipelines (Westspur)
GV_1.1_R_2014 03 31 Letter to NEB Accountable Officer - Enbridge Southern Lights
GV_1.1_Response to NEB IR No 1
GV_1.2_D_ IMS 07 Emergency and Security Management System V1.0
GV_1.2_D_IMS-04 Occupational Health and Safety Management System_V01
GV_1.2_D_LP Scorecard 2013 Nov 13_Redacted
GV_1.2_D_PIMS (IMS-09) Framework_V01
GV_1.2_R_Compliance Policy
GV_1.2_R_LP Scorecard 2013 Nov 13_Redacted
GV_1.2_R_Statement on Business Conduct
GV_2.1_D_Department Risk Management Process Description
GV_2.1_D_Department Risk Management Process Map
GV_2.1_D_High Consequence Area Definitions (March 3rd 2011)
GV_2.1_D_LP Risk Report Management Process Description
GV_2.1_D_LP Risk Report Management Process Map
GV_2.1_D_Risk Management Policy
GV_2.1_D_Risk Management Processes
GV_2.1_R_Liquid Facility Risk Assessment Model Weightings 2011-2012
GV_2.1_R_ORM Risk Model
GV_2.2_Response to NEB IR No 1
GV_2.3_D_Field Operations Department Plan
GV_2.3_Documents and Records Summary
GV_2.4_D_10.2 HR_WFP Procedure Manual_V01
GV_2.4_D_10.3 HR_WFP Quick Reference Guide_V01
GV_2.4_D_10.4 HR_WFP FAQ_V01
GV_2.4_R_Position_Description Template_V01
GV_2.4_R_10.13 HR_Job Ladders for Govt and Public Affairs_V01
GV_3 6_Documents and Records Summary
GV_3.3_D_B1_06-02-01
GV_3.3_D_FORM-B0-D-001_DEVIATION REQUEST FORM
GV_3.3_D_IMS 01 Governing Policies and Processes
GV_3.3_Documents and Records Summary
GV_3.4_D_Appendix 1 - Training Matrices
GV_3.4_D_Appendix 2 - TRAC Syllabus 2013
GV_3.4_D_Appendix 3 - Health and Safety Forms

GV_3.4_D_Current State Report 051214
GV_3.4_D_HR 1Content Development - Content Build (Mar 30)_V01
GV_3.4_D_HR 20120914 ALD Governance Structure_V01
GV_3.4_D_HR Administrator - Resources_V01
GV_3.4_D_HR eLMS Client Orientation_2013_V01
GV_3.4_D_HR eLMS Roles and Responsibilities_V01
GV_3.4_D_HR ENBU Guiding Principles_V01
GV_3.4_D_HR End User - Job Aids List_V01
GV_3.4_D_HR IDP FAQ 2014 2_V01
GV_3.4_D_HR IDP Instructions 2_V01
GV_3.4_D_HR Individual Contributor Competencies GT_V01
GV_3.4_D_HR LD Competency Framework Process_V01
GV_3.4_D_HR LDRSHIP Dev Framework 3_V01
GV_3.4_D_HR Manager - Job Aids List_V01
GV_3.4_D_HR What Makes an Individual Development Plan IDP Rev 2_V01
GV_3.4_D_OPS Competency Matrix V01
GV_3.4_D_OPS Matrix Verification Report V01
GV_3.4_D_OPS Tech Training Mgmnt System V01
GV_3.4_R_Record - Forecast Report
GV_3.4_R_Record - Metrics
GV_3.4_R_Record - Operations Competency
GV_3.4_R_Record - PLM Test - Matrix verification
GV_3.4_R_Record - PLM Test - Student all Report
GV_3.4_R_Record - Supervisor Report
GV_3.4_R_Record - TRAC - Quick Ref Card
GV_3.4_R_Record - TRAC Screen
GV_3.4_R_Record - Training Completion
GV_3.5_D_IMS 04 Occupational Health and Safety Management System
GV_3.5_D_IMS 06 Environmental Management System
GV_3.5_D_IMS 07 Emergency and Security Management System
GV_3.5_R_Operational Reliability Review Nov 26
GV_3.6_D_Documents Policy
GV_3.6_D_Governance Documents Library How To
GV_3.6_D_IMS 02 Compliance and Ethics_V01
GV_3.6_D_OMS_Operating-Maintenance Procedures Management Standard Document_V01
GV_3.6_D_Procedure Library Processes
GV_3.6_R_Governance Documents Library Communication
GV_3.6_R_Governance Documents Library FAQs
GV_3.6_R_Procedure Library Communication
GV_4 2_D_B1_02-02-01_rev12
GV_4 3_Documents and Records Summary
GV_4.1_Documents and Records Summary

GV_4.3_Response to NEB IR No 1
GV_4.4_Response to NEB IR No 1
IR on training-9 May (v1)
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Line Summary Maps - 2013
Major Outage Coodination Upstream Downstream Lines
Major Outage Coordination Downstream Lines(April 09 2014) NEB-regulated1
Major Outage Coordination Upstream Lines (April 09, 2014) NEB-regulated1
March 18 2014 - Excavation Table Top Lessons Learned
Mentee List- Central
Mentee List-Eastern Region
Mentee List-Enbridge Sask
Mentee List-Northern Region
Minutes March 18 2014 - Table Top Exercise_Redacted
NEB Audit Governance Level May Schedule
NEB Audit Governance Level May Schedule
NEB Org chart CR all v2
NEB Org chart EPSI all v2
NEB Org chart.ER.all
NEB Org chart.NR.all
NEB Org chart.WR.all
NEB Regulated Pressure Vessels - Shipped Product Only
NEB tanks 2014 and OOS inspections planned Rev1
Project Integration Slides
Registry_Inventory
response_6 31b_Goals Objectives for Emergency Response
Risk Register - Emergency Security Mgmt v1.11 - Audit Copy
RP_System Capacity_Rev1
Third Party Consulting Service Requisition Form
TRAC Syllabi V01
Western Region ER Records
YP Ice Deployment Exercise - Mar 11 2014