



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

Mr. Guy Jarvis
President, Liquids Pipelines
Accountable Officer under the NEB Act
Enbridge Pipelines Inc.
3000 Fifth Avenue Place
425 -1st Street S.W.
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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 – Environmental Protection Program*

The Board has completed its Final Report for its audit on Enbridge's Environmental Protection Program.

A Draft Report documenting the Board's evaluation of Enbridge's Environmental Protection 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.

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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.

The Board has enclosed the Final Audit Report and associated appendices with this letter. The Board will make the Final Audit Report and Appendices 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 Environmental Protection 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. Environmental Protection Program

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Enbridge Pipelines Inc. and National Energy Board-Regulated Subsidiaries (Enbridge)
3000 Fifth Avenue Place
425 -1st Street S.W.
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31 March 2015

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 environmental protection. 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 Environmental Protection 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 Environmental Protection 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 Environmental Protection 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 OPR was 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 Environmental Protection 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 environmental protection 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 environmental 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 Environmental Protection program has been in existence for many years, thus its environmental 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 through targeted compliance verification activities as part of its Environmental Protection program ongoing regulatory mandate.

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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 have 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 have 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 environmental protection.

(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

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

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

EMS: Enbridge's Environmental Management System

EPP: Environmental Protection 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 Environmental Protection 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 environmental protection 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.

Section 48 of the OPR indicates that regulated companies "shall develop, implement and maintain an environmental protection program that anticipates, prevents, manages and mitigates conditions that could adversely affect the environment." However, the Board notes that construction and abandonment activities are usually regulated and managed through practices and programs developed and approved for each project or application. Using this audit to evaluate the application of the program and practices for managing activities that have not been fully described and approved would be neither efficient nor in the interest of Canadians. The Board has therefore not included construction and abandonment activities in the scope of this audit. The Board will evaluate these program requirements during separate Board compliance assurance activities.

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 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.

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 Environmental Protection 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 Environmental Protection 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.

Environmental Protection Program Audit Office and Field Activities

- Audit opening meeting (Edmonton, AB) – 5 May 2014
- Edmonton office interviews (Edmonton, AB) – 5-16 May 2014
- Field verification activities:
 - Interviews – Sherwood Park, AB – 26-30 May 2014
 - Interviews – Estevan, SK – 9-11 June 2014
 - Interviews – Regina, SK – 12 June 2014
 - Interviews – Sarnia, ON – 24-26 June 2014
 - Inspection - Ontario – 7-11 July 2014
 - Sarnia Terminal
 - Keyser Pump Station
 - North Westover Pump Station
 - Various Right of Way Activities
 - Inspection - NWT - 21-25 July 2014
 - Enbridge LP Norman Wells pump station and maintenance shop
 - Fort Simpson maintenance shop and office
 - Zama City Terminal
 - Various Right of Way Activities
 - Inspection - Quebec - 28 July – 1 August 2014
 - Montreal Terminal
 - Terrebonne Pump Station
 - Various Right of Way Activities

Environmental Protection Program Audit Office and Field Activities Cont'd

- Inspection - Manitoba- 25-29 August 2014
 - Cromer Terminal
 - Souris Pump Station
 - West Souris Pump Station
 - Glenboro Pump Station
 - Various Right of Way Activities
- Inspection - Saskatchewan - 25-29 August 2014
 - Midale Terminal
 - Steelman Terminal
 - Odessa Pump Station
 - Glenavon Pump Station
 - Bryant Pump Station
 - Various Right of Way Activities
- Inspection - Alberta - 15–19 September 2014
 - Hardisty Terminal
 - Hershel Pump Station
 - Metiskow Pump Station
 - Various Right of Way Activities
- 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

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;
- (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 is committed to implementing a corporate management system and not merely an operations management system as many companies do.

Enbridge's records indicate that it started developing its management system after the Board's Integrity Management 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 Environmental Protection 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 Environmental Protection program. The issues related to designing and establishing processes as described below and in Appendix I 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 was 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 environmental protection 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 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 environmental protection 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 environmental protection program requirements correspond to the company’s Environmental Management System. The Board identified that Enbridge’s Environmental Management System (IMS-06) 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-06 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 Environmental Protection program resides within its Environmental Management department. This department is comprised of subject matter experts who are responsible for providing environmental 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 Environmental Protection program resides with a number Enbridge's functional departments. The Board therefore considered the sum of the Environmental Management department and all other departments' environmentally related responsibilities as comprising the Environmental Protection program for the purposes of this audit.

Due to the transitory nature of Enbridge's corporate management system, the Board found that Enbridge's Environmental Protection 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 Environmental Protection program has been in existence for many years, thus the environmentally 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 Environmental Protection 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 Environmental Protection program based on information provided by Enbridge during the audit.

Details of how each of the audited elements impacts the Environmental Protection 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 Environmental Protection program.

Notwithstanding the many policies, processes, principles, programs and initiatives that Enbridge had developed to direct and support its environmental protection 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 Environmental Protection 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 program level processes, practices and programs for identifying the majority of its hazards. Enbridge had developed risk assessment and management programs to evaluate and manage and mitigate the risks associated with safety, health and the environment. The Board found that Enbridge's Liquid Pipelines (LP) Environment department compiled and maintained a list (Hazard and Risk Registers) of environmentally related hazards (risks) which pose a potential risk/liability to the organization. Risk Registers include planned actions, status of planned actions, action owners and planned and actual completion dates for risks requiring action(s).

While Enbridge had implemented its hazard processes and procedures, the Board's audit of Enbridge's environmental protection program identified three areas of non-compliance in the sub-element of Hazard Identification, Risk Assessment and Control.

The Board found that, regardless of the practices implemented at the program level, Enbridge's management system processes did not meet the Board's OPR process requirements as described within section 1.0 *Audit Terminology and Definitions* above.

Enbridge did not demonstrate that it had established and implemented a management system process for developing and implementing controls to prevent, manage and mitigate the identified hazards and risks.

Additionally, the Board has found that Enbridge had not applied controls to all of its "significant" level environmental risks.

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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.

At the program level, Enbridge provided copies of various processes for identifying, listing and monitoring of its legal requirements. Following the review of the provided documentation and records, the Board found that Enbridge had identified the majority of its legal requirements and had developed a legal list and was undertaking activities to monitor compliance with its legal requirements. The Board, however, also found that the program legal list did not account for all of the compliance requirements. Specifically, they did not include information related to NEB regulatory requirements such as Orders, Certificates and other directions and undertakings.

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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 developed documented, explicit goals related to its environmental protection obligations for it to base its management system and environmental protection program on and as required by OPR, section 6.3.

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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 was meeting the Board's requirements with respect to organizational structure and roles and responsibilities.

The Board also found that Enbridge had developed and implemented mechanisms for evaluating the adequacy of its human resources required to meet its management system and environmental protection program obligations. The Board, however, found deficiencies with Enbridge's developed evaluation of need practices. Specifically, Enbridge did not appropriately account for staff outside of its Environmental Management department in evaluating the resourcing requirements for its environmental protection program nor did it sufficiently account for resources required to develop and implement its management system.

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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

This sub-element of the audit requirements states that the company must have an established, implemented and effective process for developing and implementing corrective, mitigative, preventive and protective controls for the hazards and risks identified in Elements 2.0 and 3.0. This sub-element also states that the company must 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.

The Board found that Enbridge had developed and implemented programs to control (prevent, manage and mitigate) the majority, and most significant, of its environmental hazards and risks.

The Board also found that Enbridge does not have a management system or program level process for coordinating, controlling and managing the operational activities of employees and other people working with or on behalf of the company that meets the OPR requirements.

Based on the Board's evaluation of Enbridge's management system and the Environmental Protection 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 3.2 - 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. This sub-element also includes requirements for companies to establish and implement a process for developing contingency plans for abnormal events that may occur during construction, operation, maintenance, abandonment or emergency situations.

The Board found that Enbridge demonstrated that it had developed plans and procedures to address the abnormal operating conditions identified within its environmental protection program.

The Board also found that Enbridge does not have a management system process for developing contingency plans that meets the requirements of the OPR.

Based on the Board's evaluation of Enbridge's management system and the Environmental Protection 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, at the program level, Enbridge had implemented a number of practices for management of change applicable to its environmental protection program. Additionally, the Board found that the program level processes did not meet all of the OPR requirements with respect to applicability and design.

The Board also found that Enbridge's management system level management of change process did not meet the OPR requirements with respect to design, content and establishment and implementation.

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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 Environmental Protection 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 environmental protection information.

The Board found that Enbridge was undertaking a high number of internal and external communication activities as part of its environmental protection program activities.

At the program level, the Board found that Enbridge had established and implemented a communication process that it uses to communicate environmental related information and issues internally and externally.

The Board also found that although Enbridge had several initiatives and programs that provide for external and internal communication of information related to environmental protection, Enbridge did not demonstrate a documented management system communication process that meets the OPR requirements. Enbridge's management system was limited to requiring the development of departmental communications plans.

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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.

At the program level, the Board found that Enbridge had a process to prepare, review, revise and control documents for its environmental protection program.

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).

Enbridge was also unable to demonstrate that it had established and implemented a management system process for preparing, reviewing, revising and controlling the documents that met the requirements of the OPR.

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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 Environmental Management department had processes for inspecting, conducting surveillance and monitoring activities to evaluate the adequacy and effectiveness of the company's protection programs. However, the Board found that Enbridge could not demonstrate that these activities were being consistently implemented and that the frequency associated with these activities was not sufficient to actively monitor the environmental health of Enbridge's facilities.

The Board found that, while Enbridge was undertaking many of the activities that would normally be undertaken as part of surveillance and monitoring program, it had not developed or implemented them in a manner that meets the Board's program requirements.

The Board found that Enbridge has established and implemented a data management system that meets the Board's requirements.

The Board identified that Enbridge has developed and implemented practices for conducting regular aerial patrols of its facilities. The Board also found that, while Enbridge's procedures and training programs for aerial ROW patrols include the requirement for observing the environmental conditions of the ROW, the company's patrol reports did not include requirements to develop records that demonstrate that the environmental conditions were surveyed or assessed during the ROW patrols. As such, Enbridge did not demonstrate that its aerial surveillance programs comply with the requirements of OPR.

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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 include hazards, incidents and near-misses and for taking corrective and preventive actions, including steps to manage imminent hazards.

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 Environmental Protection 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. The Board found, however, that Enbridge had not organized them within a program as required by the OPR.

The Board found that Enbridge had undertaken a number of audit related activities as part of its internal audit practice. The Board also found that Enbridge had developed corrective actions to address deficiencies identified during these activities.

With respect to developing a process for conducting audits as required by OPR section 53, Enbridge indicated that it utilized a number of different methods used in combination to meet these requirements. Upon reviewing the individual processes and practices the Board found that they do not meet the OPR requirements by design and practice. The Board also found that Enbridge was not able to demonstrate that it has undertaken audits consistent with the OPR requirements.

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 Environmental Protection 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 that resulted in appropriate records management practice being implemented at the program and corporate levels.

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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 Environmental Protection 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 environmental protection 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 environmental protection 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 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 Environmental Protection program also reflected the transitory nature of Enbridge's management system and process issues as noted. The Board found, however, and most importantly, that, regardless of the design and implementation status of its management system, Enbridge's environmental protection program and the processes and practices being used, identified and controlled the majority and most significant of the company's hazards and risks. Enbridge's Environmental Management System is closely aligned with the OPR requirements at the program level.

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 Environmental Protection 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:

ENVIRONMENTAL PROTECTION PROGRAM AUDIT EVALUATION TABLEⁱ

1.0 POLICY AND COMMITMENT

1.1 Leadership Accountability

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.

References: OPR section 6.2

Assessment:

Accountable Officer

The Board requires the company to appoint 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.

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 it's accountable officer has the authority over the human and financial resources required to meet the Board's substantive expectations.

Summary

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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.

Compliance Status: Compliant

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.)

Environmental Protection Program Policy and Commitment Review

Environmental Policy

Enbridge's Environmental Management System (EMS) falls within its IMS. IMS-06, dated 5 June 2013, contains the Liquids Pipelines *Environmental Policy*. In this policy, Enbridge commits to *complying with government regulations and standards through internal rules and procedures for environmental protection that will be consistent with industry codes and guidelines.*” Interviews with company representatives at all levels revealed a consistent awareness of the *Environmental Policy* and a clear understanding of its intent.

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 the management systems that were being developed and implemented at the time of the audit. 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, 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 of 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 and communicated Environmental Protection policies applicable to its activities that had been communicated and integrated within the company's activities.

The Board found that Enbridge has established clear management system guidance with respect to its process for developing policies and goals.

The Board found that Enbridge has developed a policy statement that sets out the company's commitment to these general policies and goals and has communicated the its employees.

The Board also found that Enbridge has not established an explicit policy 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 that meets the Board's requirements.

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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.

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.

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.

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 step 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.)

Environmental Protection Program Hazard Identification, Risk Assessment and Control

Environmental Protection Program Hazard Identification

Within IMS-06, *Environment Management System (EMS)*, section 3.2.1 *Environmental Aspect Identification and Evaluation of Significance*, Enbridge describes the process it follows to identify environmental hazards and potential hazards. This document refers to the “environmental aspect” when discussing risks and hazards. Enbridge defines “environmental aspect” as the elements of activities, products or services performed by the company that can interact with the environment. Following the identification of potential aspects, the aspects are systematically assessed to

determine the level of risk and to apply control measures where required according to their established IMS and EMS processes described in this sub-section. In reviewing this process, the Board found that Enbridge has included an effective level of detail to ensure the process is implemented consistently.

Environmental Protection Program Inventory of Hazards and Potential Hazards

Enbridge provided its Liquids Pipelines business unit *Environmental Protection Risk Register* and a department level risk register as part of the audit documentation. At the business unit level, the risks are documented at a higher level (i.e. generalized groupings) and include risks pertaining to repeat non-compliances and improving environmental culture throughout the organization. At the department level, the risk register is detailed and the Board found that it included appropriate content with respect to Enbridge's environmental hazards.

Environmental Protection Program Risk Evaluation

The Board identified that, at the departmental level, Enbridge has developed specific program requirements to address EMS risk management requirements. Enbridge indicated that its departmental processes are based on and linked with the Risk Management Process in IMS-01. Enbridge's processes included analysis of information gathered in the risk identification stage to understand the nature of the risks and to evaluate any potential controls to mitigate the risks to an acceptable level. The company practices incorporated the use of a risk matrix (Heat Map) to identify and categorize risks into four groupings. At the IMS-01 level, Enbridge presented evidence that demonstrated it had set its acceptable risk tolerance as Level II (Medium Risk). According to the information provided by Enbridge, risk response plans are required to be developed for Level III and Level IV risks to reduce the risks to acceptable levels (Level II or below).

Environmental Protection Program Developing and Implementing Controls

The Board identified that Enbridge's EMS, section 3.3.2, *Environmental Risk Identification and Assessment* outlined the company's process for implementing and establishing a risk control plan. It explains the hierarchy of risk reduction controls, which ranges from administrative controls to elimination or substitution of the activity. According to this process, control plans are integrated into business unit planning, and supporting processes such as department planning and environmental emergency response training. Enbridge provided examples of environmental control plans that were in various stages of implementation and development at the time of the audit.

According to the Enbridge's IMS-01, a control program (risk response plan) must be established for all risks assigned level II or higher. However, at

the Environmental Protection Program level, IMS-06 states that a control program should be implemented for all risks assigned a risk level of III or higher. While there are program level practices that are not entirely aligned with governance processes due to the order of their documentation, the annual management system review process to improve the management systems will assist with such alignment. Additionally, records reviewed by the Board found that there were level III environmental risks in Enbridge's *Environmental Risk Registry* that do not have control programs as per the IMS-06 requirements. Interviews with Enbridge staff indicated that the hazards associated with this practice were not necessarily on-going operational issues but would be categorized as project or site specific issues that are known but not covered fully by standard practices. Wildfire hazards were provided as an example. While the Board did not necessarily disagree with the practice, the Board is of the opinion that the controls development process should include clear definitions and practices to address these types of issues as failure to define the acceptable practice could lead to uncontrolled hazards.

Environmental Protection Program Communicating Controls

The Board identified that Enbridge's EMS, section 3.3.2, *Environmental Risk Identification and Assessment* outlined the company's process for implementing and establishing a risk control plan. It explains the hierarchy of risk reduction controls, which ranges from administrative controls to elimination or substitution of the activity. According to this process, control plans are integrated into business unit planning, and supporting processes such as department planning and environmental emergency response training. Enbridge provided examples of environmental control plans that were in various stages of implementation and development at the time of the audit.

In reviewing Enbridge's control development practices it was noted that the process map for risk identification and assessment states that the Environmental Protection Program is still developing its process for communicating controls. However, the Board did find evidence of controls being communicated to staff and examples included environmental bulletins, facility Environmental Management Manuals, etc. As part of their corrective action plan, Enbridge will need to establish and implement a process for communicating the controls to anyone who is exposed to the risks.

Reporting of Hazards, Potential Hazards, Incidents and Near-misses

Based on interviews and document and record reviews, the Board found that Enbridge did not have a process for internal reporting of environmental hazards at either the governance management system or program levels that met the OPR requirements. Enbridge's tier 2 documents describe the company's practices for identifying hazards, assessing risks and applying controls. These documents focus on the worksite and the worker. They help manage the worksite hazards and serve as appropriate administrative controls for hazard mitigation. Enbridge management and workers are

required to attend formal training programs on worksite hazard identification, risk management and hazard control. During interviews and inspections at Enbridge sites, the Board noted that the programs Enbridge described in its existing tier 2 documents for hazard identification, risk assessment and controls were known and understood throughout the company's operating regions. Updates to the program were being initiated at the time of the audit and this was understood by the employees. Regional management at Enbridge review a sample of completed forms at safety meetings and management meetings to ensure that quality is maintained.

Environmental Protection Program Data Management System

The Environment department is transitioning to a new data management system for monitoring, analyzing and trending hazards, incidents and near-misses. At the time of the audit, the company was beginning the implementation of its EnCompass system. Since EnCompass was not yet fully functional, the Environmental Protection Program was continuing to use an existing spreadsheet based practice. The company was recording and tracking information in both the old and new system during the transition. When reviewing the documents, the Board reviewed records from both systems to observe the types of incidents that were being tracked. Enbridge uses the hazard information in its data management system as feedback on the hazard and potential hazard identification process. It also uses the hazard information in its data management system to determine if additional controls are necessary for the hazards that have been identified.

Enbridge also compiles metrics, significant events and other key environmental information at the departmental and business unit level on a quarterly basis. This environmental performance reporting ensures that Enbridge tracks and reviews environmental trending data so that appropriate actions can be taken. The tracking information Enbridge reviews includes the actions taken to address trends and to support continued improvement. Enbridge's environmental performance reporting consists of data compiled for metrics, and information on individual environmental events that require actions to be completed or need additional visibility within the organization. For example, the Pipeline Operating, Environmental Health and Safety Committee reports environmental trends and metrics.

Summary

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

The Board found that Enbridge had developed and implemented many practices for identifying, evaluating and managing its environmental hazards

and risks at the program level.

The Board found Enbridge's program level processes for evaluating risk and developing controls had deficiencies relating to the development of controls.

The Board found that at a program level Enbridge had listed the majority and most significant of its environmental; however, the process for developing a list of hazards and potential hazards within risk registers, as described in the governance management system processes, did not meet the OPR requirements.

The Board found that Enbridge had established and was maintaining a data management system for monitoring and analyzing the trends in hazards, incidents, and near-misses.

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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 registers, 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. 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 are 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.)

Environmental Protection Program Legal Requirements

Identifying and Monitoring Compliance

The Board identified that, at the program level, Enbridge was following the EMS, section 4.8, *Environment Management System Core Processes* for establishing its Legal Register. This register is a subset of the larger governance-level compliance register. The Legal Register for the Environmental Protection Program identifies the primary internal and external requirements designated as significant by Enbridge based on environmental aspects, impacts and risk analysis. Enbridge staff indicated that they monitor legal requirements through various methods, such as industry associations, professional associations and legal software monitoring programs. The Board found the program level process used by the Environmental Protection Program for identifying and monitoring compliance with legal requirements has been implemented as designed.

Establishing and Maintaining a List of Legal Requirements

When reviewing Enbridge's Environmental Protection Program legal list, the Board determined that it includes the relevant federal, provincial, and territorial legislation and regulations. This list is also used to inform the development of facility specific Environmental Management Manuals in order to ensure compliance with regulatory requirements and these Manuals were reviewed during Board inspections. However, the Board notes that Enbridge's legal list does not include legal requirements involved in Board Certificates or Orders. For this reason, the Board found that the scope of Enbridge's legal list does not meet the Board's requirements.

Identifying and Resolving Non-Compliances with Legal Requirements

EMS, section 4.8 states that Enbridge maintains up-to-date and accurate compliance information in its Legal Register for its Environmental Protection Program. The company updates the Legal Register for its Environmental Protection Program to capture:

- new or changed regulatory requirements;
- changes in Enbridge operation and assets, such as abandonment of existing assets or implementation of new types of assets; and
- changes in operating locations and jurisdictions.

The Environmental Protection Program does not specify that an MOC process must be used when legal requirements change. However, by practice Enbridge staff demonstrated that they used its MOC process for legal requirements. The Board verified this practice through record review.

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 that had accounted for the majority of its legal requirements within its environmental protection program.

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 Environmental Protection 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.)

Environmental Protection Program Goals, Objectives and Targets for Risks and Hazards

The Environmental Protection Program uses EMS, section 3.2, *Environmental Planning Processes* to establish its goals, objectives and targets. This EMS section refers to section 6.1, *Environmental Management Review*, which outlines the annual management assessment and review of departmental metrics and data including Health Check results, Environmental Review results, investigations, audit findings, and other sources of environmental performance and system assessment data. This process aligns with the Board’s requirements for establishing goals, objectives and targets at the Environmental Protection Program level.

However, during interviews and documentation review, Enbridge indicated that its corporate goal for environmental protection would be part of the “Top Five Priorities” (Enbridge’s equivalent of corporate goals) that states “Our ability to safely, reliably, and efficiently operate and maintain our pipeline network”. This did not specifically include any environmental protection references. As the Board’s requirements towards the protection of the environment in section 6 of the OPR are explicit, Enbridge was unable to demonstrate that it had explicitly established goals that are clearly and directly related to the environment.

Summary

The Board found that Enbridge had established processes for the establishment of Goals, Objectives and Targets that align with the Board’s requirements.

The Board also found that Enbridge had not established explicit goals relating to the protection of the environment as required by the OPR.

Based on the Board’s evaluation of Enbridge’s management system and Environmental Protection 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.)

Environmental Protection Program Organizational Structure and Roles and Responsibilities

Roles and Responsibilities

During the audit, Enbridge indicated that the Vice President of Health, Safety, Environment and Support Services is the management system owner of the company's Environmental Protection Program. Enbridge provided documents and records that demonstrated it had established and maintained documented roles and responsibilities statements related to its environmental protection program and activities that applied to all levels within the organization as well as contractors. Through document and record review and staff interviews the Board identified that Enbridge had established, documented and communicated its organizational structure as it related to environmental protection.

Annual Evaluation of Resource Need

Enbridge demonstrated that it uses several mechanisms to evaluate its human resources needs. 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;
- Environment Department Plan development – IMS-01 processes outline the steps involved in developing a Department Plan and resourcing the department;
- Workforce planning – The Enbridge Human Resources department leads the Environmental 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 Environmental department develops a detailed annual work plan that takes into account the priorities, objectives and Department Plan of the Liquids Pipelines business unit. This includes an evaluation of the resources required for the Environmental department.

The Board identified that the resource evaluation mechanisms described were being implemented within the environment 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 environmental protection responsibilities. For example Field Operations and Maintenance staff have environmental protection management responsibilities that require accounting 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.

The Board found that Enbridge had established and implemented several mechanisms for reviewing its environmental protection program workforce needs.

The Board also found that Enbridge’s evaluation of need did not specifically account for all staff with management system establishment, implementation or maintenance or environmental protection responsibilities and, therefore, did not demonstrate that the human resources allocated to establishing, implementing and maintaining its management system and meeting for meeting its OPR section 6 obligations are sufficient.

Based on the Board’s evaluation of Enbridge’s management system and Environmental Protection 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

3.1 Operational Control-Normal Operations

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.

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.

References:

OPR section 6.5(1)(e),(f),(q)

Assessment:

Governance Developing and Implementing Operational Controls – Normal 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.)

Environmental Protection Program Developing and Implementing Operational Controls – Normal Operations

As noted in sub-element 2.1 above, The Board identified that Enbridge's EMS, section 3.3.2, *Environmental Risk Identification and Assessment* outlined the company's process for implementing and establishing a risk control plan. It explains the hierarchy of risk reduction controls, which ranges from administrative controls to elimination or substitution of the activity. According to this process, control plans are integrated into business unit planning, and supporting processes such as department planning and environmental emergency response training. Enbridge provided examples of environmental control plans that were in various stages of implementation and development at the time of the audit.

The Environmental Protection program created Environmental Management Manuals for each facility in 2012. These manuals give site Operations personnel a single reference for procedures for all relevant environmental requirements at each facility. Enbridge uses these manuals to describe its process for tracking permit requirements to the municipal level as applicable for each facility. Based on interviews and document review, the Board found that staff in the Environmental Protection program provides training related to the Environmental Management Manuals, particularly if a significant activity or process in these manuals changes.

Based on the document and record review and subject to its finding for sub-element 2.1 above, the Board found that Enbridge had developed and implemented a significant number of programs, processes and practices to prevent manage and mitigate its environmental hazards.

Environmental Protection Program Coordinating, Controlling and Managing Operational Activities

During interviews, Environmental Protection program staff indicated that they use the same methods for controlling and coordinating the operational activities of employees and other people working on behalf of the company, as they do for communicating control programs. Enbridge described several activities and practices that the company uses to coordinate the activities of contractors and consultants. The Board found that Enbridge used a number of practices such as pre-job hazard assessments, project risk assessments and tailgate meetings to coordinate Enbridge staff and contractors to ensure that activities are completed in a way that is safe and protects the environment. While the Board saw evidence of the practices described,

Enbridge did not demonstrate that it had had a documented process for coordinating the activities of contractors and consultants at the environmental protection program level.

Summary

The Board found that, subject to its findings in sub-element 2.1 above, Enbridge had a process for developing controls to prevent, manage and mitigate its identified environmental hazards.

The Board found that Enbridge had developed controls to prevent manage and mitigate its identified environmental hazards.

The Board found that Enbridge had established processes and practices for coordinating, controlling and managing its operational activities within its environmental protection program.

The Board also found that Enbridge did not demonstrate that it had established and implemented a documented process for coordinating the activities of contractors and consultants at the environmental protection program level.

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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

3.2 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 Upset and Abnormal Operating Conditions

Enbridge uses the processes described in sub-elements 2.1 and 3.1 of this audit report to identify hazards and potential hazards to the occupational health and safety of its workers during abnormal operating conditions, accidental releases, incidents and emergency situations. Therefore, the general findings of those sub-elements apply to this sub-element as well. Since any issues applicable to this sub-element must be addressed in the corrective action plan developed for sub-element 2.1, the Board will not assign further Non-Compliances for the governance process in this sub-element.

Governance Developing Contingency Plans for Abnormal Events

The Board requires the company to establish and implement an effective process for developing contingency plans for abnormal events that may occur during construction, operation, maintenance, abandonment or emergency situations. It is important to note that contingency plans are not limited to emergency response. The Board found that Enbridge's governance processes did not include specific processes or policies for developing contingency plans for abnormal events.

(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.)

Environmental Protection Program Upset or Abnormal Operating Conditions

The Board found that Enbridge's EMS, section 3.1, contains a process for developing and implementing controls to prevent, manage, and mitigate

environmental hazards and risks, including those associated with abnormal or upset conditions. The process requires Enbridge to use a hierarchy of risk reduction controls when developing the risk control plans. One of the control programs being implemented by the Environmental Protection department is related to environmental emergency response. This was the same process applied for normal operating conditions.

Review of the information provided by Enbridge identified that within it had developed the *Enbridge Environment Emergency Response Directory* as a reference guide for environment staff to access critical environmental emergency response information and resources in the event of an environmentally related incident. The directory contains information on emergency response procedures and expectations, resources, templates, suppliers and contractors, and monitoring plans for air, water, wildlife and waste management. The Board reviewed documentation and records that indicated that Enbridge reviews and updates the directory once a year. The directory outlines the tasks expected of environmental staff such as air monitoring planning, wildlife deterrence planning and site sensitivity analysis, among others. As well, Enbridge demonstrated that its environmental protection staff is responsible for developing environmental sensitivity maps for all of the pipeline corridors. These maps are shared with the Emergency and Security department for application during planning and incident response.

Environmental Protection Program Developing Contingency Plans

During the audit, Enbridge environmental staff indicated that they do not have an established and implemented program level process for developing contingency plans for abnormal events that may occur during construction, operation, maintenance and abandonment activities. Regardless of the lack of process, Enbridge was able to demonstrate that it was developing contingency plans as a matter of practice where a need was identified. Enbridge provided documentation to demonstrate the development of contingency plans. Examples reviewed by the Board included the contingency plans and procedures within the *Enbridge Safety and Environmental Construction Manuals* and *Waste and Vegetation Management Plans*.

Summary

The Board found that, subject to its non-compliant finding relating to its governance management system process with respect to developing controls (Sub-element 2.1 *Hazard Identification, Risk Assessment and Control*, above), Enbridge has developed controls that address its identified environmental protection hazards and risks relating to upset and abnormal operating conditions.

The Board found that Enbridge has developed and documented contingency plans as a matter of practice.

The Board also found that Enbridge had not established a management system or program level process for developing contingency plans that meets the Board's requirements.

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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 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.)

Environmental Protection Program Management of Change

Notwithstanding, the process issues described above, the Board found that Enbridge had established and embedded MOC requirements within many aspects of its Environmental Protection program. The documented, operational MOC processes are found in Enbridge’s OMMs. Enbridge uses two core MOC processes to manage OMM changes:

- Liquid Pipelines MOC process – This process identifies and manages any change critical to the safety management and operational reliability of the Enbridge system; and
- Operations and Maintenance Procedures Management System – This system includes various processes to ensure proper MOC of its core procedures.

In reviewing Enbridge’s processes and practices, the Board identified that the company has incorporated formal communication requirements into its practices. The company divides its communication of changes into two categories: annual updates and critical updates. The company has formal written requirements for both of these categories. Further, Enbridge demonstrated that it uses an online database to validate, communicate and follow-up on MOC activities. The system is available to all employees and all employees demonstrated familiarity with the system during Board interviews. Interviews with Enbridge regional personnel confirmed that they have an appropriate understanding of the company’s MOC system and the communication practices.

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 on a consistent basis. The Board identified that all departments and programs were using Enbridge’s Liquids Pipelines MOC process, including environmental protection, 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 Environmental Protection 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 and Environmental Protection Program 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 occupational health and safety training of its employees. 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 documented processes for developing competency 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, and the environment. 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.

Generating and Managing Training Documents and Records

The Board found that Enbridge's process for generating and managing training documents and records is largely based on the following:

- Enbridge Learning Management System – to manage department training records;
- Matrix Verification Reports on the Field Operations Learning Management System (TRAC);
- Individual Development Plans – to manage training and records at an individual level; and

In reviewing the records, Enbridge demonstrated that it had an established, implemented and effective process for generating training documents and records.

Summary

The Board has found that Enbridge has established and implemented formal management system for identifying and managing its training requirements.

The Board also found that Enbridge has not established and implemented processes for identifying and verifying the competency requirements of its workers as required in the OPR. The Board identified that Enbridge has 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 and that its governance management system process does not meet the Board's requirements

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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.)

Environmental Protection Program Internal and External Communication Process

The Board found that Enbridge has undertaken a lot of communications both externally and internally. As well, Enbridge has integrated communications requirements within many of its processes and procedures.

During the audit, the Board identified that Enbridge's EMS, section 4.5, *Communication and Participation* described the communication process requirements for the Environmental Protection Program. This process focuses on internal communication and requires the developed of an Environmental Communication Plan. During interviews, Enbridge staff confirmed that the required communication plan had not been developed but through record reviews, Enbridge was able to demonstrate how it communicates messages about the environment through numerous activities, such as quarterly reports, alerts, and presentations to staff.

Review of the EMS communication process indicated that it had included external communication requirements but it is limited to communicating with regulators as all other external communication activities are handled through company approved spokespeople. The Board has no concerns with

this approach.

Summary

The Board found that Enbridge communicates throughout its organization as a matter of organized practice.

The Board also found that Enbridge had not established or implemented a communication process that meets the Board's requirements.

The Board also found that Enbridge has not developed a communications plan as required by its processes. The Board notes that this is a requirement of CSA Z662-11, an OPR referenced standard.

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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 also 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 applies 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.)

Environmental Protection Program Documentation and Document Control

As stated in EMS, section 4.9 Enbridge uses a standardized and consistent process for recording and tracking environmental information. The Environmental Protection program controls its document by:

- complying with all regulatory documentation requirements, systems and procedures;
- using revision codes, release dates, file creation information and other appropriate means to control document revisions; and
- using a process similar to the OMM MOC process for changes to its Environmental Management Manuals.

Based on document and record review, the Board has found that the document control practices applied to Enbridge's Environmental Protection Program is meeting the expectations of the OPR compliant with this sub-element.

Summary

The Board found that Enbridge had established and implemented processes and practices for controlling its environmental protection program documentation at a program level.

The Board also found that Enbridge had not established and implemented a governance management system process for identifying the documents required for the company to meet its obligations under OPR section 6.

The Board also found that, at the governance level, Enbridge's new IMS-01, section 4.9 *Governance Document Control Process*, dated 22 August 2014, did not meet the OPR requirements nor had it been established and implemented.

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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),(w), 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.

Surveillance and Monitoring Program

The OPR requires companies to develop and implement surveillance and monitoring program. During its audit the Board identified that Enbridge undertakes numerous types and a high number of monitoring and surveillance activities of its regulated facilities. The Board found, however, that the amalgamation of activities do not meet the OPR section 39 program requirements with respect to design and management. The Board has included its program requirements with Section 1.0 *Audit Terminology and Definitions* in the attached audit report.

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.)

Environmental Protection Program Inspection, Measurement and Monitoring

Inspection, Measurement and Monitoring

At the Environmental Protection program level, Enbridge uses several processes and activities during the inspection of its facilities. This includes:

- Health Checks;
- OMM Inspections;
- Aerial overflights; and
- Environmental Reviews (to be discussed in sub-element 4.3);

Enbridge's process requirement states that a Health Check is to be completed on one facility per region per year. However, during interviews Enbridge staff indicated that the company's Regional Analysts must complete two facility Health Checks per region per year, and this requirement is included in their annual individual performance agreements. Records reviewed by the Board confirmed that these Health Checks have occurred as described. In reviewing Enbridge's inspection practices, the Board notes that, in larger regions such as Enbridge's Central Region where there are ten facilities, this inspection frequency could result in Enbridge conducting Health Checks and Environmental Reviews once every five years at individual sites. In the Board's opinion, this frequency is not sufficient to actively monitor the environmental health of Enbridge's facilities.

It was also noted by the Board that Fields Operations staff also conduct standardized facility inspections that include environmental considerations (in addition to safety and security aspects). Review of Enbridge's standard field inspection form indicated that it contains specific environmental items that should be assessed, including appropriate waste storage, vegetation management, secondary containment and soil erosion. The Board reviewed records of these inspections during its audit and noted the following issues:

- only one record was properly completed (Enbridge could therefore not demonstrate that environmental aspects were being appropriately assessed through this activity); and
- the scope of these inspections specifically does not include the entirety of sites subject to the inspection, for example the inspections exclude laydown and storage areas.

During the audit, Board staff conducted several environmental inspections of Enbridge's terminals and noted environmental non-compliances such as waste storage and vegetation management issues within in these excluded areas. The Board is of the opinion that had the Enbridge's field facility inspections included these areas, these non-compliances would have been prevented.

ROW Aerial Inspections

Enbridge stated that it relies almost exclusively on its aerial inspections for surveillance and monitoring of its pipeline ROWs. Enbridge patrols its pipeline system on a regular basis using fixed wing aircraft and helicopters. With the exception of ROW aerial inspections of Enbridge's gathering system in Saskatchewan, all pilots completing the ROW aerial inspections are Enbridge employees. Enbridge Pipeline Saskatchewan Inc. contracts its ROW inspections to a company in Saskatchewan that patrols the gathering system on behalf of Enbridge. The Board found that Enbridge's ROW patrol frequencies are in compliance with the intent of the CSA Z662-11 standard and regulation for pipeline patrol frequency.

The Board reviewed Enbridge's procedures and reports for aerial ROW patrols. When reviewing records associated with this activity, environmental conditions of the pipeline right-of-way were only reported by exception or issue only. Therefore, Enbridge could not demonstrate that environmental aspects were being appropriately assessed through this activity.

Monitoring and Inspecting Compliance with Legal Requirements

As discussed in Section 2.2 of this audit report, Enbridge had a process for identifying the legal requirements of its Environmental Protection program and has established an environmental legal list. However, the legal list did not include NEB conditions. The Board is of the opinion that correcting the deficiency in Section 2.2 will ensure that Section 4.1 is also compliant with this requirement.

During the Audit Enbridge indicated that it uses a number of different practices for verifying its compliance including Health Checks and Internal Reviews. During review of these processes and their application within the environmental protection program the Board noted the following practices and deficiencies. Health Checks do not directly assess if the environmental legal list is being followed. Health Checks review the implementation of management plans, such as the Vegetation and Waste Management Plans and the OMMs and the company's procedures. If these documents have been updated as the result of changes to legal requirements, then Health Checks are intended to ensure the updated documents are being implemented to meet the changes in legal requirements. In interviews, Enbridge staff indicated that the protocols for Environmental Reviews, which by process include a review of the legal requirements, are developed for each individual review by the third-party auditor brought in to lead the review. By structuring the protocol this way, Enbridge ensures that the legal requirements are updated yearly at its program level.

Based on its assessment of the Health Check and Environmental Review processes, the Board found that Enbridge is monitoring most of its compliance requirements on a regular basis; however, Enbridge did not demonstrate that it was accounting for all of the legal requirements identified in OPR section 53.

Summary

The Board found that, subject to its findings related to its review of Enbridge's Health Check and Internal Review processes (Sub-element 4.3 *Internal Audit*), Enbridge has established and implemented processes for inspecting, measuring and monitoring its facilities and program.

The Board also found that Enbridge's inspection processes and practices do not meet the Board's requirements.

The Board also found that Enbridge had not developed surveillance and monitoring program that meets the requirement of OPR section 39.

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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.)

Environmental Protection Program Investigating and Reporting Incidents and Near-misses

Incident Reporting

During interviews, Enbridge staff referred to OMM, Book 1, *General Compliance Reference*, 02-02-01, Incident Reporting. Table 6 in this document is specifically about the environment and is entitled *Adverse Environmental Effects of Environment Non-Compliance*. This table defines an adverse environmental effect as a situation or activity that can adversely effect on the environment. The table provides additional details for Enbridge staff on the reporting requirements and deadlines involved.

Enbridge's OMMs also document the company's incident investigation process. The OMMs describe the criteria for what is investigated and why, as well as stakeholder responsibilities, the investigation process, training requirements for investigators, and documentation requirements.

Corrective and Preventive Actions

At a program level, EMS, section 5.3, *Non-Compliance, Corrective, and Preventive Action* and section 5.4, *Escalation of Events* explain Enbridge's Environmental Program processes for investigations, non-compliances and corrective and preventive actions. The Board reviewed these documents during its audit and identified the following information. The *Non-Compliance, Corrective, and Preventive Action* document provides the tools for systematically identifying, prioritizing and closing environmental issues and actions. It also describes the procedures for reporting all environmental non-compliance issues so they can be analyzed and assessed to promote and drive ongoing improvement. The *Escalation of Events* section establishes procedures for escalating types of incidents and events to ensure that all material events, incidents, actions or conditions (whether actual or perceived) are reported and properly evaluated. This document section further details the process Enbridge follows when investigating an environmental incident. The *Escalation of Events* section includes a sub-section on Learning and Deployment. After Enbridge completes an incident investigation, the significant lessons learned from that incident must be shared to make other systems more robust and to minimize the chance for reoccurrence. The Board notes that, because the EMS was published and implemented before the IMS was released, Enbridge will have to align the departmental management system sections with the IMS, or vice versa, once the IMS has been implemented to be compliant.

With respect to investigating instances of identified non-compliance, the Board identified that the Environment department did have processes in place for investigating non-compliances. These processes are documented in OMM, Book 1, *Incident Reporting*, which includes reporting hazards, potential hazards and near-misses. In reviewing the documents, the Board found that the process map for the Corrective Action process indicated that the process had only been partially implemented at the time of the audit. The Board is of the opinion that this may be due to the alignment concern between the EMS and IMS that the Board identified previously.

The Board reviewed two examples of environmental incident investigations completed by Enbridge. The results of these investigations led to recommendations for updating the company's training, environmental manuals and changes in the sign-off procedures for its Environmental Protection Plans that are completed before projects are kicked off.

Summary

The Board found that Enbridge has developed processes for reporting on hazards, potential hazards, incidents and near-misses, and for taking corrective and preventive actions.

The Board found that Enbridge has conducted investigations where required or where hazards, potential hazards, incidents and near-misses have or

could have resulted in the safety the public, company employees and the pipeline being significantly compromised.

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.

The Board also found that Enbridge's process for taking corrective and preventive actions is not being implemented as required by OPR. The Board has documented this deficiency in sub-element 4.3 *Internal Audits*, below. Enbridge is required to specifically consider and include corrective actions to address the process deficiencies identified in this sub-element within and corrective action plan developed for sub-element 4.3.

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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 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 required steps were fully implemented.

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.)

Environmental Protection 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 Environmental Protection 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.

Internal Audits

As noted above, 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 and number of its program audit activities that it had completed. This included its environmental Health Checks and its Environmental Reviews.

The Board identified that, at the program level, the process in EMS section 5.2, *Environmental Audit Review* sets the expectations and provides guidance on how to complete Health Checks, Environmental Reviews and audits. As per its documentation, Enbridge uses all of these verification and review processes to assess its conformance with internal and external policies and procedures, and make improvements if necessary.

EMS, section 5.2.1, *Health Checks* provides further detail on what is expected of an environmental Health Check. Enbridge uses Health Checks to assess its internal conformance, identify areas of non-standard practice and non-compliance and identify opportunities for improvement. Health Checks focus on a selection or sample of a department's processes and systems. As per Enbridge's governance processes, the Health Checks are not expected to assess every possible area of departmental operation. Enbridge's Health Checks documentation indicated that they should include assessment and verification of:

- Internal work practices, standards, and areas of confusion or differences of perception;
- Work competencies – Ensuring people are appropriately and adequately trained to perform their assigned activities, including any specific training, certifications and qualifications;
- Internal work requirements – Observing work procedures and internal policies and procedures; and
- Employee behavior – Observing how employees perform tasks.

Enbridge's environmental protection practices did not include a program level specific process for Health Checks; however, the EMS references the *Environmental Review Program Standard*, Env-2, dated May 2013. According to this *Program Standard*, a minimum of one Health Check per facility per region per year should be completed. However, during interviews Enbridge staff indicated that the company's Regional Analysts must complete two facility Health Checks per region per year, and this requirement is included in their annual individual performance agreements. The Board reviewed records confirming this practice.

The Board reviewed documentation and records outlining the standard content of environmental Health Checks and found that the content focused on the required technical and management content. The Board also identified that, according to the *Program Standard*, Health Checks do not require the people completing the assessment to use the Environment department's legal list or the NEB conditions. The Board therefore determined that this process does not provide a standardized means to assure compliance. The following are some of the categories identified as included in an environmental Health Check for a facility:

- current versions of the Environmental Policy, OMMs, Waste Management Plans, Vegetation Management Plans, Ozone Depleting Substances Environmental Management Plans, and Environmental Guidelines for Construction;
- organized environmental records (permits, monitoring reports, regulator inspection reports, etc.);
- vegetation management practices;
- land management practices;
- waste storage practices;
- waste transportation practices;
- hazardous materials practices;
- potable water; and
- specific approvals, licenses and permit conditions.

Enbridge's documentation indicated that that Environmental Reviews included many of the requirements of Health Checks but included an expanded facility and activity scope included an increased focus on compliance with and of policies, processes, procedures and external requirements. The Board noted that the *Environmental Review Program Standard* states that in addition to facilities, Environmental Reviews can include right-of-ways, integrity dig sites, pipeline management shops and valve sites. Enbridge uses the *Program Standard* to ensure that its Environmental Reviews are repeatable, and are conducted according to a set schedule, timeframe and identified roles. Enbridge conducts Environmental Reviews on a 5-year rotation amongst the company's regions. The Environmental Protection Program is responsible for identifying the objectives, scope, common protocol core and criteria for each Environmental Review. Third-party auditors are responsible for developing the criteria based on provincial and

federal legislation, Enbridge policies and NEB requirements. Enbridge uses third-party auditors to lead each environmental review with Enbridge staff providing support.

The Board reviewed two recent Enbridge internal Environmental Reviews. After reviewing the documented Environmental Reviews, the Board identified the following concerns:

- The Environmental Reviews indicated that similar findings were being identified in different regions by subsequent audits. This supports the Board's findings with respect to Enbridge's preventive action practice when taken into consideration with the Board's review of all of Enbridge's records provided during this and concurrent audits. (Examples included hazardous materials storage and documentation issues that were found in 2009, 2011, 2012 and 2013); and
- Areas for Improvement are not tracked with respect to management decisions and, where appropriate through to resolution. As an example, in the 2013 Environmental Review, the lack of environmental content within standard Field Inspections was noted. If this issue was appropriately considered and managed it could have led to better compliance by Enbridge.

The Board found that Enbridge's Environmental Review process has been implemented, and is comprehensive in providing a review of environmental activities. Additionally, the Board noted that Enbridge's practice of developing Environmental Review specific legal requirements lists for the environmental protection program was providing this program with an ability to better monitor Enbridge's compliance requirements. The Board's review of the program practices and records indicated that they had developed compliance requirement lists at levels of detail that were being monitored and updated on regular basis.

Corrective and Preventive Action Process

During the audit the Board reviewed the documentation and records associated with the corrective and preventive actions resulting from Enbridge's environmental protection audit processes. The Board found that Enbridge had been developing and tracking corrective action plans for each Environmental Review finding to completion. Enbridge provided records, including photographs, demonstrating its conformance to the process and mitigation of the findings. Review of these and other records; however, indicated that similar findings were being identified in different regions by subsequent audits. As previously noted, this supports the Board's findings with respect to Enbridge's preventive action practice when taken into consideration with the Board's review of all of Enbridge's records provided during this and concurrent audits.

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.

Enbridge provided several examples of completed audit related activities; however, the Board found deficiencies with respect to the design of the management system audit processes and activities.

The Board also found that Enbridge was not able to demonstrate that it has undertaken audits consistent with the OPR requirements.

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 Environmental Protection 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 the 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.)

Environmental Protection Program Records Management

The Board identified that Enbridge’s EMS, section 4.9, *Control of Environmental Management System Documents* describes the program level process for generating, retaining and maintaining records for Enbridge’s Environmental Protection Program. Through interviews and record review during the audit, the Board identified that Enbridge was implementing the processes and practices described to manage the records in its Environmental Protection Program. The Board found that this process provided a consistent method for recording and tracking environmental information, thereby helping to promote environmental performance.

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, 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 that resulted in appropriate records management practice being implemented at the program and corporate levels.

Based on the Board’s evaluation of Enbridge’s management system and Environmental Protection 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 Review

Enbridge's IMS-01, section 4.3, *Management System Review Process* outlines the management system review process for ensuring that each management system is reviewed annually to confirm that the desired results are being achieved. As detailed in IMS-06, section 6.0, *Management System Review*, Enbridge's environmental management representatives complete an annual management system review of IMS-06. This review includes environmental processes, performance objectives, targets and progress. The review may propose changes or additions to performance measures. The review may also identify areas for improvement or emphasis in the upcoming year. The Board reviewed the minutes from Enbridge's 2013 Environmental Management Review and found that Enbridge had completed an assessment of the activities, results and improvement opportunities in its Environmental Protection program. Enbridge indicated that an additional process, PC-1801, *Accountable Officer Report*

Development Process, is used to evaluate the management system and the output of this evaluation is the *Annual Report*.

Upon review of the 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-06 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-06 annual review process does not include a review of the implementation of the Environmental Protection Program at the Operations level.

Based on the Board's evaluation of Enbridge's management system and Environmental Protection 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.

Management System Evaluation

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 its effectiveness. Enbridge's IMS-06, *Management System Review Process* also overviews this requirement. Enbridge has developed an additional process, PC-1701, *Management System Evaluation Process*. The PC1701 process includes an evaluation of the adequacy and effectiveness of the overall management system. Records provided to demonstrate implementation of these processes include:

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

Upon reviewing 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-06, 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); and
- Records from the IMS-06 Management Review Process could not confirm that the management system has been fully reviewed for adequacy and effectiveness.

Based on the Board's evaluation of Enbridge's management system and Environmental Protection program against the requirements, the Board has determined that Enbridge has not established and implemented a process for evaluating the adequacy and effectiveness of its 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 the company's obligations for safety, security and protection of the environment. The report also describes the company's achievement of its goals, objectives and targets during that year. The company's performance is measured 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 30 April 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 action 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 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 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 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), the Board notes that 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 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 Environmental Protection 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.

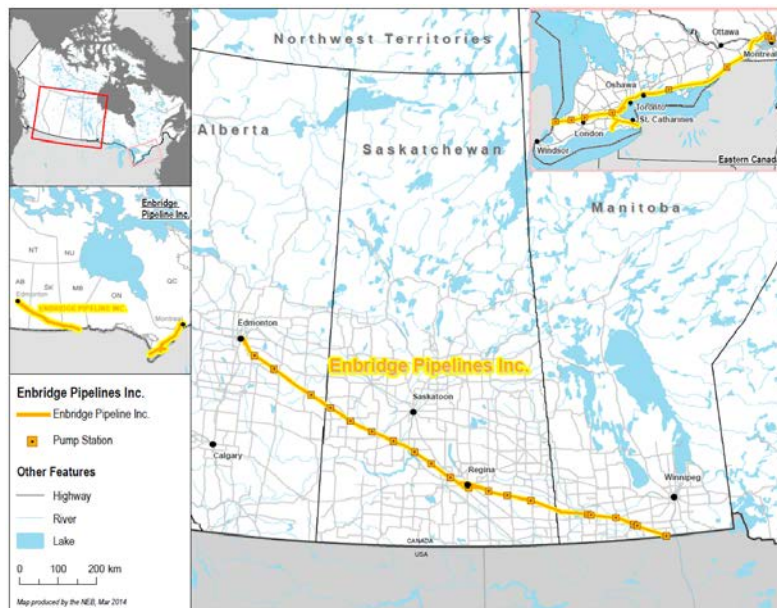
APPENDIX II
ENBRIDGE PIPELINES INC.
MAPS AND SYSTEM DESCRIPTIONS

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.

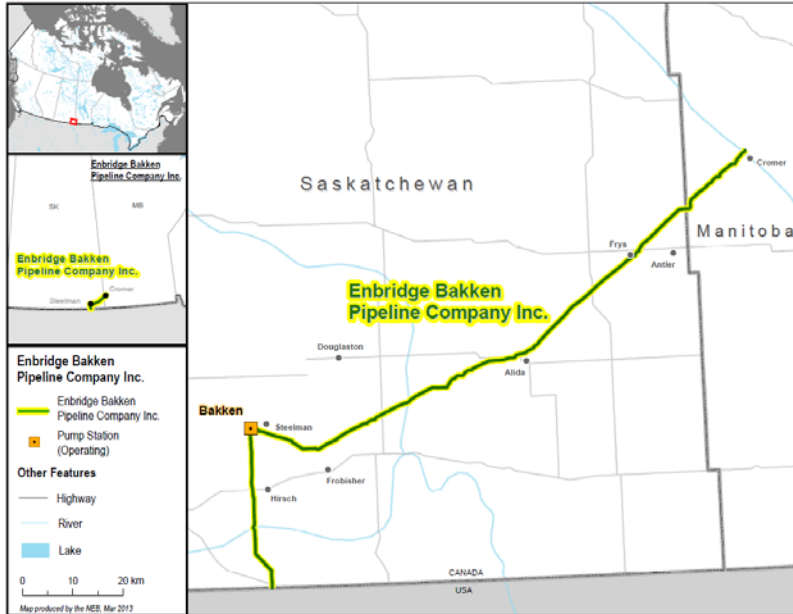
These subsidiaries hold the certificates for Enbridge’s NEB-regulated facilities.

Figure 1: Enbridge Pipelines Inc.



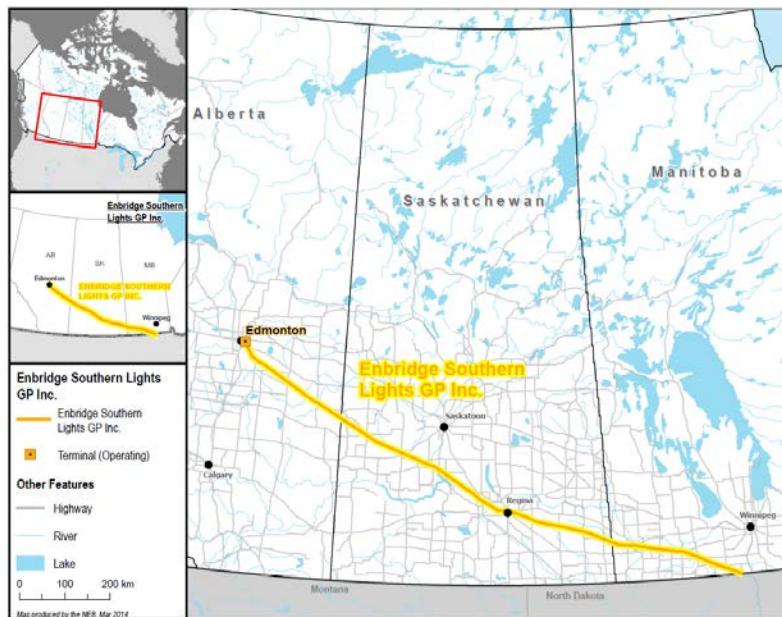
The Enbridge pipeline system, shown in Figure 1, is 7,747.04 km of oil pipelines that extend from Edmonton, Alberta, to Montréal, Québec, connecting with other oil pipelines in the United States at the Manitoba/North Dakota and Michigan/Sarnia Ontario borders.

Figure 2: Enbridge Bakken Pipeline Company Inc.



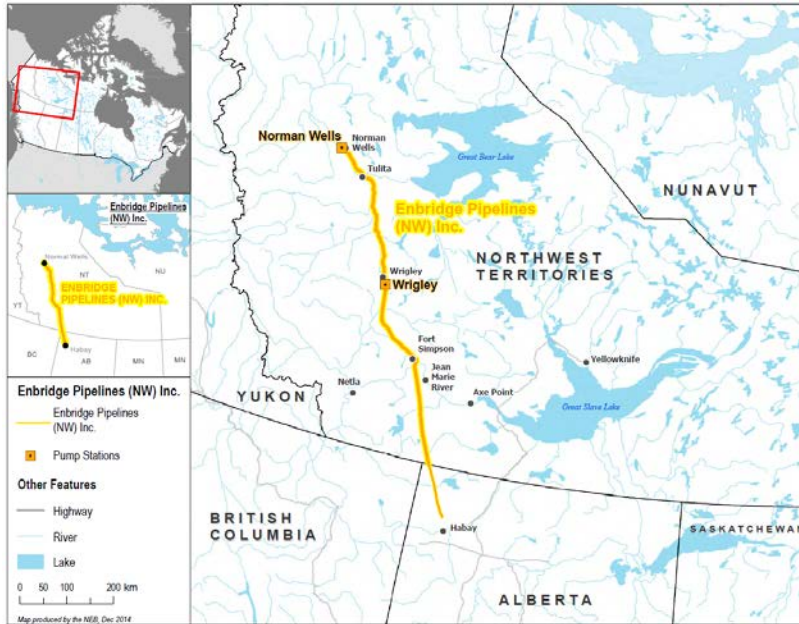
The Enbridge Bakken pipeline, shown in Figure 2, is a 157.28 km pipeline that transports oil from Cromer, Manitoba to the Saskatchewan/North Dakota border. The Enbridge Bakken pipeline continues into the United States.

Figure 3: Enbridge Southern Lights GP. Inc



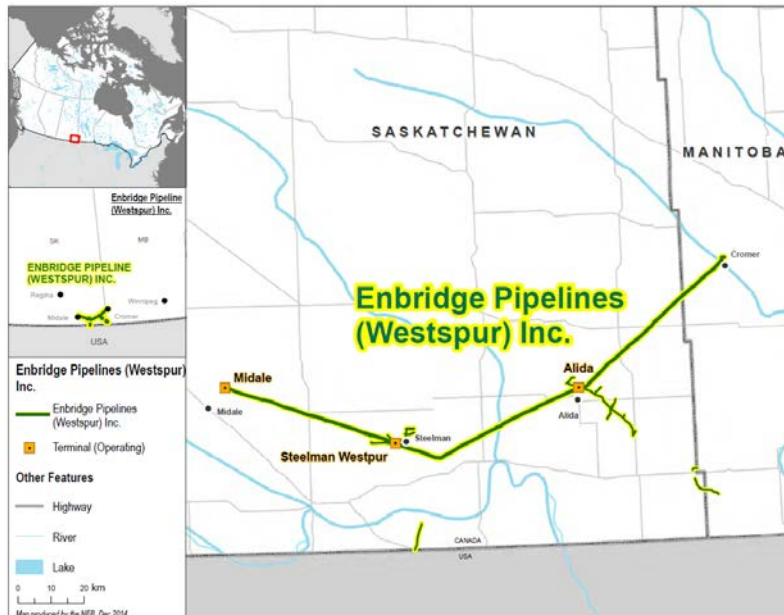
The Enbridge Southern Lights pipeline, shown in Figure 3, is a 1,529.75 km pipeline that transports oil from Edmonton Alberta to the Manitoba/North Dakota border. The Enbridge Southern Lights pipeline continues into the United States.

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 – ENVIRONMENTAL
PROTECTION PROGRAM

Company Representative Interviewed	Job Title
██████████	Director Leadership & LS
██████████████████	Director HR Business Support
██████████	Safety Coordinator
██████████	S.M.T
██████████████████	Senior Director RCIM
██████████	Hardisty Operations Coordinator
██████████	Engineer Pipeline Compliance
██████████	Electrical Maintenance
██████████████████	PLM Welder
██████████	Supervisor PLM Services
██████████	Safety Coordinator
██████████	Microprocessor Coordinator
██████████████████	Senior Environmental Advisor
██████████	Operations Coordinator Cromer Area
██████████	Senior Electrical Technician
██████████	Manager Learning Solutions
██████████	Electrical Technician
██████████	Manager Pipeline Compliance

[REDACTED]	Emergency Response Coordinator
Dale Burgess	Vice President Canadian Operations
[REDACTED]	Manager RINI
[REDACTED]	Senior Environmental Analyst
[REDACTED]	Kerrobot Area Supervisor
[REDACTED]	Environmental Analyst
[REDACTED]	Director Western Region
[REDACTED]	Manager RS&D
[REDACTED]	Acting Area Supervisor
[REDACTED]	Senior Environmental Analyst
[REDACTED]	Senior Engineer
[REDACTED]	Supervisor PLM Services
[REDACTED]	Supervisor Compliance RCIM
[REDACTED]	Senior Mechanical Technician
[REDACTED]	Manager Media Relations
[REDACTED]	Senior Manager Environment
[REDACTED]	Manager RS&D
[REDACTED]	Electrical Technician
[REDACTED]	Internal Audit Manger
[REDACTED]	S.M.T
[REDACTED]	Senior Mechanic
[REDACTED]	Senior Environmental Analyst
[REDACTED]	S.M.T

[REDACTED]	Team Leader Mechanical Services
[REDACTED]	Leader OMM Management
[REDACTED]	Supervisor Operation Training
[REDACTED]	Manager Edmonton
[REDACTED]	Kerrobot Maintenance Coordinator
[REDACTED]	Electrical Technician
[REDACTED]	Maintenance Technician #1
[REDACTED]	PLM
[REDACTED]	Director EPSI
[REDACTED]	Kerrobot PLM
[REDACTED]	Leader Internal Coms (LP)
[REDACTED]	Supervisor MLP Environmental
[REDACTED]	Senior Manager Risk Management
[REDACTED]	Senior Manager O&M Service
[REDACTED]	Compliance Coordinator
[REDACTED]	Supervisor P/L Services
[REDACTED]	Manager RSS
[REDACTED]	Mechanical Technician
[REDACTED]	Training Coordinator
[REDACTED]	PLM Supervisor
[REDACTED]	Senior Electrical Technician
[REDACTED]	Manager Environmental Programs and Projects
[REDACTED]	Community Relation Specialist

[REDACTED]	Ethics and Compliance Officer
[REDACTED]	Manager Integrated Management Governance
[REDACTED]	Director Central Region
[REDACTED]	Area Operations Manager
[REDACTED]	Kerrobot PLM
[REDACTED]	Advisor LP H&S
[REDACTED]	Manager Area Operations
[REDACTED]	Senior Mech. Technologist
[REDACTED]	Team Lead, MLP Environmental Services
[REDACTED]	PC Analyst
[REDACTED]	Supervisor Environment
[REDACTED]	Area Supervisor
[REDACTED]	Senior Manager Strategic Planning
[REDACTED]	PLM
[REDACTED]	Manager Communications Enterprise
[REDACTED]	Safety Coordinator
[REDACTED]	Senior Manager Compliance
[REDACTED]	Senior Regulatory Advisor
[REDACTED]	Emergency Response Coordinator
[REDACTED]	Director Environment
[REDACTED]	Engineering Supervisor Compliance
[REDACTED]	Senior Compliance Specialist
[REDACTED]	Senior Integrity Engineer

██████████	Senior Manager Integrated Management
██████████	Senior Environmental Analyst
██████████	Training Coordinator
██████████	Senior Manager Regional Services
██████████	Construction Supervisor
██████████	Senior Electrical Technician
██████████	Hardisty Maintenance Coordinator
██████████	Pipeline Integrity
██████████	Kerrobert PLM

APPENDIX IV
ENBRIDGE PIPELINES INC.
DOCUMENTS REVIEWED* – ENVIRONMENTAL PROTECTION PROGRAM

NAME
121204_Dept_Plan_Environment
1st Quarterly Safety Meeting Minutes - Land Services Environment
2012 Environmental Inspection - May 2014
2013_CSR_Report_on_2013_data
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 - March 28 Environment Overview Presentation Final
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 Information Exchange Agenda - Emergency and Security Management
2014 NEB Audit Information Exchange Agenda - Environment Management
2014 NEB Audit Information Exchange Agenda - Integrity Management Program
2014 NEB Audit Information Exchange Agenda - Public Awareness and Crossings
2014 NEB Audit Information Exchange Agenda - Safety Management System V2

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

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 Objectives [REDACTED]
2014_Winter_Training_Presentation_West_Rev 2
20140416_Quarterly Review Mtg Min
3 Field Inspection Reports from Sarnia Terminal
4.4 GV D Email Management Policy V01
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
Action Items List_2014April 24
Aerial Right-of-Way Inspection Checklist
Announcement - Director, Eastern Region
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
B8_01-02-04
[REDACTED] Training Profile
Clubroot Disease and Other Crop Diseases
Concordance Table - Inspection and Audit Related Terminology
Course Completions - Western for ER and Env
Cromer Area Ops Envi Training
[REDACTED] Monday Meeting Minutes
[REDACTED] - Outstanding TrainingV2
eLMS- Western Region - Course Completions
Email Management project about to be launched to Corporate, Liquids Pipelines and Major Projects_Redacted
EMM Example - Coach Training Script
EMM Example - Coaches Checklist
Employee Type by Region
EN 1.2 D IMS-06 Environmental Management System V01
EN 1.2 R 2014 Department Objectives V01
EN 1.2 R Management Review Meeting Minutes V01

EN 2.1 D B1 02-02-01 V01
EN 2.1 D EnCompass Incident Management System V01
EN 2.1 D IMS-06 Environmental Management System V01
EN 2.1 D IMS-06-3.2-F001 Environmental Planning Meeting Agenda V01
EN 2.1 D LRS User Manual V01
EN 2.1 R 2013 Q1 EMS Review Meeting Minutes V01
EN 2.1 R 2013 Q2 EMS Review Meeting Minutes V01
EN 2.1 R 2013 Q3 EMS Review Meeting Minutes V01
EN 2.1 R B8 01-02-06 V01
EN 2.1 R Management Review Meeting Minutes V01
EN 2.1 R Standard Environmental Management Review Meeting Agenda V01
EN 2.1 R Updated ODS EMP Communication V01
EN 2.1 R Waste Management Plan V01
EN 2.2 D Environmental Compliance Management System User Manual V01
EN 2.2 D Environmental Review Program Standard Env-02 V01
EN 2.2 D IMS-06 Environmental Management System V01
EN 2.2 R Management Review Meeting Minutes V01
EN 2.2 R Sample Communication of Regulatory Change
EN 2.2 R Sample Legal Update - Redacted
EN 2.2 R Standard Environmental Management Review Meeting Agenda V01
EN 2.3 D Environmental Report IMS-06-4.3-F001 V01
EN 2.3 D IMS-06 Environmental Management System V01
EN 2.3 R 2013 LP Environment Report V01
EN 2.3 R 2013 Q1 EMS Review Meeting Minutes V01
EN 2.3 R 2013 Q2 EMS Review Meeting Minutes V01
EN 2.3 R 2013 Q3 EMS Review Meeting Minutes V01
EN 2.3 R 2014 Department Plan V01
EN 2.3 R Environment Operations 2013 Objectives V01
EN 2.3 R Environment Operations 2014 Objectives V01
EN 2.3 R Management Review Meeting Minutes V01
EN 2.4 D Enbridge Contractor Safety Manual Canada 2013 V01
EN 2.4 R Job Ladder Environment, Health_Safety and Emergency Response
EN 2.4 R Sample Job profile - Contractor - Reclamation Assessment Coordinator
EN 2.4 R Sample Job Profile - Senior Environmental Analyst
EN 2.4 R Sample Job Profile - Senior Environmental Analyst, Contaminated Site Management
EN 3.2 D Community Air Monitoring and Sampling Plan V01
EN 3.2 D Contaminated Site Assessment and Remediation Program Standard Env03 V01
EN 3.2 D Contaminated Site Management Program Standard Env-08 V01
EN 3.2 D Enbridge Environment Emergency Response Directory V2 2013 V01
EN 3.2 D Environmental Sensitivity Mapping and QAQC Protocol Std V2 ENV-05 V01
EN 3.2 D Laboratory Emergency Response Services V01
EN 3.2 D Shoreline Oiling Assessment (SCAT) Survey Manual V01

EN 3.2 D Submerged Oil Recovery Plan V01
EN 3.2 D Waste Management Facility Directory V01
EN 3.2 D Waste Management Plan V01
EN 3.2 D Wildlife Response Plan V01
EN 3.2 R 2012 Environmental Tabletop Exercise Manual V01
EN 3.2 R 2012 MP118.8 Phase II ESA Report V01
EN 3.2 R 2012 MP118.8 RAP V01
EN 3.2 R 2013 Contaminated Site Work Plan V01
EN 3.2 R 2013 MP118.8 Annual Report V01
EN 3.2 R 2013 MP118.8 Remediation Program Report V01
EN 3.2 R 2013 Q4 Contaminated Site Update V01
EN 3.2 R 2014 Environmental Tabletop Exercise Community Air Monitoring V01
EN 3.2 R 2014 Environmental Tabletop Exercise Manual V01
EN 3.2 R 2014 Environmental Tabletop Exercise SCAT Plan V01
EN 3.2 R 2014 Environmental Tabletop Exercise Waste Management Plan V01
EN 3.2 R Enbridge Environment Emergency Response Directory V1 2012 V01
EN 3.2 R Environment, Liquids Pipelines Emergency Response Directory 2009 V01
EN 3.2 R Environmental Sensitivity Mapping and QAQC Protocol Std ENV-05 V01
EN 3.2 R Glenavon Community Air Monitoring and Sampling Plan V01
EN 3.2 R Glenavon Waste Management Plan V01
EN 3.2 R Glenavon Wildlife Management Plan V01
EN 3.2 R L2 Replacement Environmental Sensitivity Map 2013 V01
EN 3.2 R Rowatt Community Air Monitoring and Sampling Plan V01
EN 3.2 R Rowatt Waste Management Plan V01
EN 3.2 R Rowatt Wildlife Management Plan V01
EN 3.3 D IMS-01 Governing Policies and Processes Management System V01
EN 3.3 D IMS-06 Environmental Management System V01
EN 3.3 R 2011 ODS EMP V01
EN 3.3 R Management Review Meeting Minutes V01
EN 3.3 R ODS EMP 2013 Change Log V01
EN 3.3 R OMM Request Form B3-09-02-03 V01
EN 3.3 R OMM Request Form B3-09-03-10 V01
EN 3.3 R OMM Request Form B3-09-03-11 V01
EN 3.3 R OMM Request Form B3-S-001 V01
EN 3.3 R Standard Environmental Management Review Meeting Agenda V01
EN 3.3 R Updated ODS EMP Communication V01
EN 3.3 R Updated ODS EMP V01
EN 3.5 D IMS-06 Environmental Management System V01
EN 3.5 R elink EMS Executive Announcement July 8, 2013 V01
EN 3.5 R Environment Alert - Near Miss - Grand River Exercise V01
EN 3.5 R Environment Bulletin - Drip Tray Incident Prevention Measures V01
EN 3.5 R Environmental Protection Program Training 2012 V01

EN 3.5 R Environmental Protection Program Training 2013 V01
EN 3.5 R IMS-06 EMS Rollout Communication Plan for 2013 V01
EN 3.5 R Management Review Meeting Minutes V01
EN 3.6 R Management Review Meeting Minutes V01
EN 4.1 D EnCompass Incident Management System V01
EN 4.1 D Environmental Compliance Management System User Manual V01
EN 4.1 D Environmental Review Program Standard Env-02 V01
EN 4.1 D IMS-06 Environmental Management System V01
EN 4.1 D NEB Environmental Pipeline Performance Measures Standard Env-04 V01
EN 4.1 R 2013 Q1 EMS Review Meeting Minutes V01
EN 4.1 R 2013 Q2 EMS Review Meeting Minutes V01
EN 4.1 R 2013 Q3 EMS Review Meeting Minutes V01
EN 4.1 R EMS Management Review Presentation 2013 V01
EN 4.1 R Management Review Meeting Minutes V01
EN 4.2 D IMS-06 Environmental Management System V01
EN 4.2 R 2012 MP 1865.2757 Incident Investigation V01
EN 4.2 R 2013 Don River Incident Investigation V01
EN 4.2 R 2014 Department Objectives V01
EN 4.2 R EnCompass IMS - Participant Manual (Version 2)
EN 4.3 D Environmental Review Program Standard Env-02 V01
EN 4.3 D IMS-06 Environmental Management System V01
EN 4.3 R 2013 Department Objectives V01
EN 4.3 R 2014 Department Objectives V01
EN 4.3 R Management Review Meeting Minutes V01
EN 4.4 D Enbridge Documents Policy V01
EN 4.4 D Enbridge Records Management Policy V01
EN 4.4 D Enbridge Records Retention Schedule V01
EN 4.4 D IMS-06 Environmental Management System V01
EN 4.4 R Environmental Review Program Standard Env-02 V01
EN 4.4 R Management Review Meeting Minutes V01
EN 5.0 D IMS-06 Environmental Management System V01
EN 5.0 D Standard Environmental Management Review Meeting Agenda V01
EN 5.0 R Management Review Meeting Minutes V01
EN_1.2_Documents and Records Summary
EN_1.2_Response to NEB IR No 1
EN_2.1_R_Sample Health and Risk Assessment, Indoor Air Quality
EN_2.1_R_3 examples of EPSI hazard ID forms from 2013
EN_2.1_R_Excerpt from POESHC Meeting Minutes of March 5 2013
EN_2.1_R_Updated WMP Communication V01
EN_2.2_Documents and Records Summary
EN_2.2_R_Draft Environment Compliance Register_V01
EN_2.2_R_Environment Legal Register

EN_2.2_Response to NEB IR No 1
EN_2.3_Document and Record Summary
EN_2.3_Response to NEB IR No 1
EN_2.4_D_IMS-06 Environmental Management System_V01
EN_2.4_Documents and Records Summary
EN_2.4_R_2014 Workplan Forecast 1_V01
EN_2.4_R_2014 Workplan Forecast 2_V01
EN_2.4_R_Contaminated Site Assessment and Remediation Program Standard Env-03_V01
EN_2.4_R_eLink EMS Executive Announcement July 8, 2013_V01
EN_2.4_R_Incident Command System Training - Course Description_V01
EN_2.4_R_Job Profile_Environment Emergency Preparedness and Response Coordinator
EN_2.4_R_New Positions Example - Contaminated Site Program - Email summarizing options for resources
EN_2.4_R_New Positions Example - Contaminated Site Program - FTE calculations
EN_2.4_R_Organizational Chart - Environment Operations_V01
EN_2.4_R_Organizational Chart - Environmental Programs and Projects_V01
EN_2.4_R_Project Environmental Representatives - Roles and Responsibilities_V01
EN_2.4_R_Regional Environmental Representatives -Roles and Responsibilities_V01
EN_2.4_Response to NEB IR No 1
EN_2.5_R_ERAT Action Items from Q3 2013
EN_2.5_R_ERAT Minutes from Q3 2013
EN_2.5_R_ERAT Minutes from Q4 2013
EN_3.1_R_Sample EnCompass Report NW Wolverine
EN_3.1_R_Sample Communication to Landowner
EN_3.1_D_B3 09-02-03_V01
EN_3.1_D_B3 09-03-10_V01
EN_3.1_D_B3 09-03-11_V01
EN_3.1_D_B6 03-08-07_V01
EN_3.1_D_B8 01-02-01_V01
EN_3.1_D_B8 01-02-02_V01
EN_3.1_D_B8 01-02-03_V01
EN_3.1_D_B8 01-02-04_V01
EN_3.1_D_B8 01-02-05_V01
EN_3.1_D_B8 01-02-06_V01
EN_3.1_D_B8 01-02-07_V01
EN_3.1_D_B8 01-02-08_V01
EN_3.1_D_B8 01-02-09_V01
EN_3.1_D_B8 01-02-10_V01
EN_3.1_D_B8 01-02-11_V01
EN_3.1_D_B8 01-02-12_V01
EN_3.1_D_B8 01-02-13_V01
EN_3.1_D_Book 3 Standard – Subject 01-02-01 Pre-Job Meeting_V1
EN_3.1_D_Book 3 Standard – Subject 01-02-02 Pipeline Facilities Notification_V1

EN_3.1_D_Environmental Guidelines for Construction_V01
EN_3.1_D_Greenhouse Gas Reporting Standard Environmental Standard Env-06_V01
EN_3.1_D_Groundwater Monitoring Program Standard Env-01_V01
EN_3.1_D_IMS-06 Environmental Management System_V01
EN_3.1_D_National Pollutant Release Inventory Environmental Standard Env-07_V01
EN_3.1_D_NEB Environmental Pipeline Performance Measures Standard Env-04_V01
EN_3.1_D_Ozone Depleting Substances Environmental Management Plan_V01
EN_3.1_D_Vegetation Management Plan_V01
EN_3.1_D_Waste Management Plan_V01
EN_3.1_Documents_and_Records_Summary
EN_3.1_R_2014 Department Objectives_V01
EN_3.1_R_Annual Internal Tank Inspection Form
EN_3.1_R_CSR Excerpt_V01
EN_3.1_R_Daily Inspection Report (KP329.26)_V01
EN_3.1_R_Daily Inspection Report (KP504.4)_V01
EN_3.1_R_Dangerous Goods Shipping Documents_V01
EN_3.1_R_Emissions Summary - Edmonton_V01
EN_3.1_R_Enbridge Presentation to Stantec
EN_3.1_R_Environment Alert(EIA-00003-2013)_V01
EN_3.1_R_Environmental Clearance (MP 334.36)_V01
EN_3.1_R_Environmental Clearance (MP 667)_V01
EN_3.1_R_Environmental Management Manual(Hardisty)_V01
EN_3.1_R_Environmental Management Manual(Sarnia)_V01
EN_3.1_R_Facility-Wide Groundwater Monitoring - 2012 QA Program_V01
EN_3.1_R_Field Inspection(PLM Cromer)_V01
EN_3.1_R_Fuel Tank Containment Area(Steelman)_V01
EN_3.1_R_Halocarbon Assets_V01
EN_3.1_R_HWIN Admin Tracking_V01
EN_3.1_R_Hydrovac Sampling Report (Metiskow)_V01
EN_3.1_R_Hydrovac Slurry Sampling Report (Strome)_V01
EN_3.1_R_Line21 Environmental Inspection_V01
EN_3.1_R_Lower Trent Conservation Permit_V01
EN_3.1_R_Maximo Work Order Detail Report_V01
EN_3.1_R_NEB Notice of Contamination_V01
EN_3.1_R_Permit to Take Water (4565-9GQNEX)_V01
EN_3.1_R_Pesticide Application Permit (MB)_V01
EN_3.1_R_Pesticide Application Permit (NWT)_V01
EN_3.1_R_Pesticide Field Ticket (Cromer)_V01
EN_3.1_R_Pesticide Field Ticket (Manitou)_V01
EN_3.1_R_Potable Water Testing Results_V01
EN_3.1_R_Q1 2014 Safety Meeting Minutes
EN_3.1_R_Q3 2013 Field Inspection Report – Cromer PLM

EN_3.1_R_Q4 2013 Field Inspection Report – Cromer PLM
EN_3.1_R_Q4 2013 Safety Meeting Minutes
EN_3.1_R_Service Tag, Leak Test Form_V01
EN_3.1_R_Stantec 2014 Workplan
EN_3.1_R_Stormwater Release Records (Edmonton)_V01
EN_3.1_R_Waste Storage Forms_V01
EN_3.1_R_Weed Control Provider Registration_V01
EN_3.1_R_Wildlife Management Plan for Line 37 Response
EN_3.1_Response to NEB IR No 1
EN_3.2_Documents and Records Summary
EN_3.2_Response to NEB IR No 1
EN_3.3_D_OMM Revision Request Form OMM-B0-R-001_V1
EN_3.3_Documents and Record Summary
EN_3.3_R_Sample MOC - Book 8 Environment, Subject 01-02-06 Contaminated Soil Identification, Temporary Storage and Disposal
EN_3.3_R_Sample MOC - Critical Revision 13-02 submitted by Environment and justification
EN_3.3_R_Sample MOC - Critical Revision Approval
EN_3.3_R_Sample MOC - Email Communication with Director, Field Operations Services
EN_3.3_R_Sample MOC - Email Communication with impacted parties re implementation of Critical Revision
EN_3.3_R_Sample MOC - Email Communication with NEB re incorporation of AVC into Critical Revision
EN_3.3_R_Sample MOC - Environment Bulletin re New Book 8 Procedure
EN_3.3_Response to NEB IR No 1
EN_3.4_D_eLMS AdminGuide_V01
EN_3.4_D_Environment Training Matrix_V01
EN_3.4_D_IMS-06 Environmental Management System_V01
EN_3.4_D_NEB Environmental Pipeline Performance Measures Standard Env-04_V01
EN_3.4_D_Ops Training Matrix_V01
EN_3.4_D_OpsTraining Module1_V01
EN_3.4_D_OpsTraining Module2_V01
EN_3.4_D_OpsTraining Module3_V01
EN_3.4_D_OpsTraining Module4_V01
EN_3.4_D_OpsTraining Module5_V01
EN_3.4_D_OpsTraining Module6_V01
EN_3.4_D_OpsTraining Module7_V01
EN_3.4_D_TRAC Records Process_V01
EN_3.4_D_TRAC Syllabus 2013 - Environment Training Section_V01
EN_3.4_Documents and Records Summary
EN_3.4_R_2013 ENV101 eLMS Completions_V01
EN_3.4_R_2013 ENV101 TRAC Completions_V01
EN_3.4_R_2014 Department Objectives_V01
EN_3.4_R_Contaminated Sites Course Proposal_V01
EN_3.4_R_DACUM Presentation_V01
EN_3.4_R_EMS ELMS Overview Communication_V01

EN_3.4_R_Environment Operations Canada Training Matrix, 2008
EN_3.4_R_Environmental Protection Program Training 2012_V01
EN_3.4_R_Environmental Protection Program Training 2013_V01
EN_3.4_R_Safety and Environmental Guidelines for Contractors_V01
EN_3.4_R_Western Region Training Record_V01
EN_3.4_Response to NEB IR No 1
EN_3.5_Documents and Records Summary
EN_3.5_R_Communication Regarding Contaminated Site Management Course
EN_3.5_Response to NEB IR No 1
EN_3.6_D_Enbridge Documents Policy_V01
EN_3.6_D_Enbridge Records Management Policy_V01
EN_3.6_D_Enbridge Records Retention Schedule_V01
EN_3.6_D_IMS-06 Environmental Management System_V01
EN_3.6_Documents and Records Summary
EN_3.6_R_Environmental Review Program Standard Env-02_V01
EN_3.6_Response to NEB IR No 1
EN_4.1_Documents and Records Summary
EN_4.1_Response to NEB IR No 1
EN_4.2_Documents and Records Summary
EN_4.2_Response to NEB IR No 1
EN_4.3_Documents and Records Summary
EN_4.3_Response to NEB IR No 1
EN_4.4_Documents and Records Summary
EN_4.4_Response to NEB IR No 1
EN_5.0_Documents and Records Summary
EN_5.0_Response to NEB IR No 1
Enbridge Assets by NEB Entity
Enbridge Clubroot Sampling Protocol January 2014 v2 0
Enbridge Final Responses to close-out discussion
Enbridge Mainline Patrols_Western, Central and Northern
Enbridge_Environmental_240_Neutral_Footprint_Initiative
Environment IL Course
Environmental Clearance MP688 6013 - L3 - CM-GF - GW129760 - C1 -REV2_Redacted
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