

National Energy
Board



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Audit Report

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Canada



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1.0 Introduction: NEB Purpose and Framework

The National Energy Board's (the Board or the NEB) corporate 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.

The *Onshore Pipeline Regulation, 1999* (OPR-99) came into force 1 August 1999 reflecting the NEB's intent to progress from prescriptive regulation to management system based regulation. To evaluate compliance with the regulations, the NEB undertakes program audits of its regulated companies. Following the audits, companies are required to submit and implement a Corrective Action Plan (CAP) to address and mitigate any findings of non-compliance. The results of the NEB audits are used in the NEB risk-based life cycle approach to compliance planning.

The NEB requires that each company be able to demonstrate the adequacy and implementation of the methods they have selected and employed to achieve compliance.

2.0 Audit Terminology and Definitions

Audit: A systematic, independent and documented process for obtaining evidence and evaluating it objectively to determine the extent to which audit criteria are fulfilled.

Corrective Action Plan (CAP): Addresses the non-compliances identified in the Audit Report and explains the methods and actions which will be used to "correct" them.

Operator: The Operations and Maintenance agreement was transferred to Westcoast Energy Inc. following the dissolution of St. Clair Pipelines (1996) Ltd.

Program: A documented set of processes and procedures to regularly accomplish a result. The program outlines how plans and procedures are linked and how each one contributes towards the result.

Process: A systematic series of actions or changes taking place in a definite order and/or manner (i.e. procedure), and directed towards a result.

Procedure: A documented series of steps of a process followed in a regular and defined order and/or manner allowing individual activities to be completed in an effective and safe manner. The procedure will also outline roles, responsibilities and authority required for completing each step.

Finding: The evaluation or determination of the adequacy of programs or elements in meeting the requirements of the *National Energy Board Act*, associated regulations and Part II of the *Canada Labour Code*.



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

Non-Compliant: A program element does not meet legal requirements. The company has not demonstrated that it has developed and implemented its programs, process and procedures to meet the legal requirements. A CAP is required.

Compliant with recommendation: An opportunity to improve practices or to change practices that are currently in compliance but have the potential, based on professional judgment, to lead to non-compliance. A CAP is not required.

3.0 Audit Objectives

The objectives of the audit were to determine Emera Brunswick Pipeline Company Ltd.'s (EBPC) compliance with the *National Energy Board Act* (NEB Act), the *Onshore Pipeline Regulations*, 1999 (OPR-99), the *National Energy Board Pipeline Crossing Regulations*, Part I and Part II (PCR), Part II of the *Canada Labour Code* (CLC), and regulations made under Part II of the CLC as it relates to the Brunswick Pipeline System.

4.0 Audit Scope

The scope of this audit included EBPC's integrity, safety, environment, emergency preparedness and response (EPR), crossings and public awareness programs which have been developed and implemented for the Brunswick Pipeline system to meet the requirements of the NEB Act, OPR-99, PCR and Part II of the CLC.

In service since 2009, EBPC is a wholly owned subsidiary of Emera Inc., an energy company based in the Maritime Provinces. EBPC is the certificate holder for the NEB-regulated Brunswick Pipeline which is a 145-kilometer, 30-inch diameter pipeline that currently delivers natural gas supplied exclusively by Repsol Energy Canada Ltd. from the Canaport TM Liquefied Natural Gas receiving and re-gasification terminal in Saint John, New Brunswick (NB), to the north eastern United States (U.S.) as well as to markets in Canada through a backhaul on the Maritimes & Northeast Pipeline system. The pipeline is buried for its entire length and extends through southwest NB to an interconnection with the Maritimes & Northeast Pipeline (M&NP) transmission system at the Canada-U.S. border near St. Stephen, NB.

5.0 Audit Process

The NEB notified EBPC in a letter dated 18 March 2010 of its intent to conduct an audit on the federally regulated Brunswick Pipeline System. On 29 April 2010 an opening meeting was



conducted with representatives from EBPC and its Operator in Saint John, NB to discuss the audit objectives, scope and process; and to initiate the development of a schedule for conducting the site visits and staff interviews. For a list of EBPC and Operator staff interviewed, refer to Appendix VIII. For a list of documents and records reviewed for each program audited, refer to Appendix IX.

In its application to the Board, EBPC indicated that it would meet the program requirements of the OPR-99 as it related to the operations and maintenance of the Brunswick Pipeline system through “adoption and augmentation as necessary of M&NP’s policies, programs and procedures” (Section 5.3 of EBPC’s Application to the Board). EBPC entered into an Operation and Maintenance (O&M) Agreement with St. Clair Pipelines (1996) Ltd. to commission, operate and maintain the facilities of EBPC. The O&M agreement was transferred to Westcoast Energy Inc. with the dissolution of St. Clair Pipelines Ltd. Spectra Energy is the current holder of the Operations and Maintenance agreement.

As the Operator, Spectra Energy developed and implemented the programs that were evaluated during this audit. Its employees were interviewed as they were designated to carry out the responsibilities on behalf of EBPC as per the O&M Agreement. In order to accurately reflect the operation, the Board evaluated the implementation of the programs by the Operator in the program tables and determined compliance status accordingly. As such, the non-compliances identified by this audit constitute an assessment of the Operator’s implementation of the programs. The Board holds EBPC, as the certificate holder, accountable for the provision of oversight and ensuring the development and implementation of corrective actions to address all non-compliances.

O&M agreement notwithstanding, as the certificate holder, EBPC retains the ultimate accountability for ensuring the programs meet regulatory requirements. The Board holds EBPC accountable to provide oversight to ensure that the programs implemented on its behalf are effective in meeting its regulatory requirements. In order to accurately capture the role of the certificate holder, EBPC was evaluated against the criteria of Element 5.1 Management Review.

Audit Activities, Locations and Dates
<ul style="list-style-type: none">• Audit Notification Letter – 18 March 2010• Audit Opening Meeting (Saint John, NB) – 29 April 2010• Document and records review (Calgary, AB) – 01 June – 05 July 2010• Head Office Interviews (Waltham, MA) – 6-7 July 2010• Field verification of all programs:<ul style="list-style-type: none">○ Halifax, NS – 8 July 2010○ Saint John, NB – 12 July 2010○ Fredericton, NB – 13-14 July 2010• Audit Close-out Meeting (Fredericton, NB) – 28 October 2010



6.0 Audit Results

For evaluation purposes, the NEB management requirements have been organized in a table format and include 5 elements and 16 sub-elements:

- 1) Policy and Commitment
 - 1.1 Policy and Commitment Statements
- 2) Planning
 - 2.1 Hazard Identification, Risk Assessment and Control
 - 2.2 Legal Requirements
 - 2.3 Goals, Targets and Objectives
- 3) Implementation
 - 3.1 Organizational Structure, Roles and Responsibilities
 - 3.2 Management of Change
 - 3.3 Training, Competence and Evaluation
 - 3.4 Communication
 - 3.5 Documentation and Document Control
 - 3.6 Operational Control – Normal Operations
 - 3.7 Operational Control – Upset or Abnormal Operating Conditions
- 4) Checking and Corrective Action
 - 4.1 Inspection, Measurement and Monitoring
 - 4.2 Corrective and Preventive Actions
 - 4.3 Records Management
 - 4.4 Internal Audit
- 5) Management Review
 - 5.1 Management Review

These elements correspond to legal requirements and are arranged to match standard management system elements to aid in the evaluation of the requirements. Each discipline was audited against each of these elements; the results of these assessments are provided in tables appended to the report. Element 5.1 Management Review was assessed for EBPC independent of the disciplines and is presented in a separate table also appended to the report. A summary of these results is presented below.



EBPC Findings Table					
I-Integrity	II-Safety	III-Environment	IV-Emergency Preparedness	V- Crossings	VI- Public Awareness
1.0 POLICY AND COMMITMENT					
1.1 Policy & Commitment Statement					
Compliant	Compliant	Compliant	Compliant	Compliant	Compliant
2.0 PLANNING					
2.1 Hazard Identification					
Compliant	Compliant	Compliant(rec)	Non-Compliant	Compliant	Compliant(rec)
2.2 Legal Requirements					
Compliant	Non-Compliant	Non-Compliant	Compliant	Non-Compliant	Compliant(rec)
2.3 Goals, Objectives and Targets					
Compliant	Compliant	Compliant(rec)	Compliant	Compliant	Compliant
3.0 IMPLEMENTATION					
3.1 Organizational Structure, Roles and Responsibilities					
Compliant	Compliant(rec)	Non-Compliant	Compliant	Compliant	Compliant(rec)
3.2 Management of Change					
Compliant	Non-Compliant	Non-Compliant	Non-Compliant	Non-Compliant	Non-Compliant
3.3 Training, Competence and Evaluation					
Compliant	Compliant	Non-Compliant	Compliant	Compliant(rec)	Non-Compliant
3.4 Communication					
Compliant(rec)	Non-Compliant	Non-Compliant	Compliant	Compliant(rec)	Compliant(rec)
3.5 Documentation and Document Control					
Compliant(rec)	Compliant(rec)	Compliant(rec)	Compliant	Compliant	Compliant
3.6 Operational Control-Normal Operations					
Compliant	Compliant	Non-Compliant	Compliant	Compliant	Compliant
3.7 Operational Control-Upset or Abnormal Operating Conditions					
Compliant	Compliant	N/A	Compliant	N/A	N/A
4.0 CHECKING AND CORRECTIVE ACTION					
4.1 Inspection, Measurement and Monitoring					
Compliant	Compliant(rec)	Compliant(rec)	N/A	Non-Compliant	Non-Compliant
4.2 Corrective and Preventive Actions					
Compliant	Compliant	Compliant	Non-Compliant	Non-Compliant	Compliant
4.3 Records Management					
Compliant	Compliant	Compliant	Compliant	Compliant	Compliant(rec)
4.4 Internal Audit					
Compliant(rec)	Compliant(rec)	Compliant(rec)	Compliant(rec)	Compliant(rec)	Compliant(rec)
5.0 MANAGEMENT REVIEW					
5.1 Management Review					
Non-Compliant					

Compliant(rec) : Compliant with Recommendation

6.1 Integrity Management Program

Review of the Operator's planned and implemented Integrity Management Program (IMP) activities indicates that it has benefited from the formal adoption of Annex N of CSA Z662-07. No significant issues are apparent from this audit. The Operator's internal audit process will have



to be modified to reflect the recommendations made in the evaluation of Element 4.4 Internal Audit to remain in compliance in the long term.

The assessment of the overall IMP can be found in Appendix I: EBPC Integrity Management Program Audit Evaluation Table.

6.2 Safety Program

The audit determined that EBPC and its Operator are implementing a safety management program. The findings of non-compliance and recommendations for improvement outlined in this audit relate to the lack of formal development and implementation of processes for: identifying legal requirements, the management of change as well as an overarching communication plan.

The explanation of these deficiencies and an assessment of the safety program, can be found in Appendix II: EBPC Safety Program Audit Evaluation Table.

6.3 Environmental Protection Program

The audit of the Environmental Protection Program indicated that there are no issues which are considered immediately significant. However, the company needs to formalize and update aspects of its program to make its practices fully reflect the conditions of the operating phase versus post-construction phase.

In general, the findings of non-compliance and recommendations for improvement outlined in this audit related to the lack of formalization in the following areas: the identification of legal requirements, clarification of roles and responsibilities for key personnel, the management of change process, the communication of environmental issues, and the process for procedural updates.

The explanation of these deficiencies and an assessment of the system as a whole can be found in Appendix III: EBPC Environmental Protection Program Audit Evaluation Table.

6.4 Emergency Preparedness and Response Program

The audit of the EPR program is tested as required by the certificate condition and OPR-99. While no issues with this program were considered immediately significant, there are elements of the program and activities which require further formalization and implementation. The findings of non-compliance and recommendations for improvement from this audit relate to hazard identification, the management of change and the documentation of follow up from emergency exercises.

The explanation of these deficiencies and an assessment of the system as a whole can be found in Appendix IV: EBPC EPR Program Audit Evaluation Table.



6.5 Crossing Program

The audit of the crossing program indicates that the majority of the program as implemented at the time of the audit is aligned with Board expectations. The findings of non-compliant and recommendations for improvement relate to the identification of legal requirements, the management of change and the procedures for monitoring encroachments on the right of way.

The explanation of these findings and an assessment of the system as a whole refer to Appendix V: EBPC Crossing Program Audit Evaluation Table.

6.6 Public Awareness Program

The audit of the public awareness program indicates that it is, for the most part, meeting the requirements of the regulations. The non-compliances and recommendations identified during the audit relate to formal management of change, measuring and monitoring and training.

The explanation of these deficiencies and an assessment of the system as a whole can be found in Appendix VI: EBPC Public Awareness Program Audit Evaluation Table.

6.7 Management Review

As the criteria for the internal operational audits and the review of the O&M Agreement were not developed at the time of the audit, the adequacy of these processes could not be verified; therefore this element was assessed as non-compliant.

Meanwhile, EBPC Management is undertaking some of the required oversight expected by the Board in that operational activities are reviewed and monitored through: weekly conference calls with the Operator; active communication with internal and external stakeholders; and ongoing monitoring of compliance to its certificate conditions.

It is also the intent of EBPC to complete an annual review of its O&M Agreement to ensure the Operator is meeting the requirements of the agreement, and an audit of its operational programs. The audit process to be used will integrate the internal audit process currently used by the Operator and the audit requirements set out in the Emera Inc. Environmental Management System.

The assessment of Element 5.1: Management Review can be found in Appendix VII.

7.0 Conclusions

Except where noted, the audit of EBPC's system indicates that the operational programs are functioning in compliance with NEB expectations. Having only been in operation for one year at the time of the audit, many non-compliant findings in this report were the result of programs that were not yet fully implemented as designed.



While all non-compliant findings described in the appendices require corrective action plans and resolution, of particular note is the non-compliance described in Appendix VII, Management Review. The Board recognizes EBPC demonstrated a degree of oversight and ongoing communication with its Operator. However, it is the Board's view that formally documented and active oversight by the certificate holder is essential to the ongoing safe operation of the pipeline for which it is accountable.

8.0 Abbreviations

CAP: Corrective action plan
CLC: *Canada Labour Code*
COSHR: Canada Occupational Health and Safety Regulations
CSA: Canadian Standards Association
EBPC: Emera Brunswick Pipeline
EHS: Environment Health and Safety
EHSC: Environment Health and Safety Committee
EM: Emergency management
EMO: Emergency Measures Organization
EPASS: Environment Performance and Safety System
EPP: Environmental Protection Program
EPR: Emergency preparedness and response
EPZ: emergency planning zone
ERP: Emergency response plan
ILI: in-line inspection
IMP: Integrity management program
IWOL: Incident Without Loss
JSA: Job safety analysis
LMS: Learning Management System
M&NP: Maritimes and Northeast Pipeline
MA: Maine
MOC: Management of change
MS: Management System
NB: New Brunswick
NEB: National Energy Board
NS: Nova Scotia
O&M: Operation and maintenance
O&MSM: Operations and Maintenance Specifications Manual
OHS: Occupational Health and Safety
OPR-99: *Onshore Pipeline Regulations, 1999*
PA: Public Awareness
PCR: *National Energy Board Pipeline Crossing Regulations*
PIOC: Pipeline Integrity Oversight Committee



PRS: Pressure reducing station
RoW: Right-of-way
SAIL: System and Integrity Logging
SCC: Stress corrosion cracking
SOP: Standard Operating Procedure
U.S.: United States of America

APPENDIX I

EBPC INTEGRITY MANAGEMENT PROGRAM AUDIT ASSESSMENT TABLE

<p>1.0 POLICY AND COMMITMENT</p> <p>1.1 Policy and Commitment Statements</p> <p>Expectations: The company shall have a policy approved and endorsed by senior management (the Policy). It should include goals and objectives and commit to improving the performance of the company.</p>
<p>References:¹</p> <p>OPR-99 sections 4, 47 and 48</p> <p>CSA Z662-07 Clauses 10.2.2 and 10.14</p>
<p>Assessment:</p> <p>Emera Brunswick Pipeline Company's (EBPC) Integrity Management Program (IMP) document, dated March 31, 2010 was developed and implemented by the Operator. It includes Section 2: Corporate Policies, Objectives, and Organization. Subsection 2.1 includes a Policy and Objectives description of short term (1-4 years) and long term (5-10 year) plans for all integrity related program developments, including hazard identification, inspection and investigation and maintenance activities for all pipelines included within the scope of the document. The IMP Policy is endorsed and approved by the Operator's senior management and had been adopted by EBPC. In addition, there is the Pipeline Integrity Oversight Committee (PIOC), whose mandate it is to administer the IMP for all of the Operator's Canadian regulated pipelines. PIOC committees are comprised of the Operator's senior management including: Director, Pipeline Integrity (Houston), Manager, Pipeline Design (Houston), Manager, Metallurgical Services (Houston), Director, Operations Compliance (Houston), Director, Facilities Operations (Houston), Director, Technical Operations (Southeast Region), Director, Technical Operations (Northeast Region).</p> <p>Based on documents reviewed and interviews, the Operator was able to demonstrate that it has a policy which commits to continual improvement and is communicated to its staff.</p>
<p>Compliance Status: Compliant</p>

¹ Each "Reference" in this table contains specific examples of the "legal requirements" applicable to each element but are not necessarily a complete list of all applicable legal requirements.

2.0 PLANNING

2.1 Hazards Identification, Risk Assessment and Control²

Expectations: The company shall be able to demonstrate a procedure to identify all possible hazards. The company should assess the degree of risk associated with these hazards. The company should be able to support the rationale for including or excluding possible risks in regard to its environment, safety, integrity, crossings and awareness and emergency management and protection programs (management and protection programs). The company should be able to implement control measures to minimize or eliminate the risk.

References:

OPR-99 sections 4 (2), 39, 40, 41

CSA Z662-07 Clauses 10.2, 10.3.1.1 (d), 10.14.1 (a)(b), 16.2

Assessment:

As part of an Operations and Maintenance (O&M) Agreement between EBPC and its Operator, the Operator is implementing and maintaining the integrity management program (IMP).

The Hazard Identification process is described in the IMP Section 8: Hazard Identification and Control. This section summarizes the hazards that are considered to be relevant to its operations. The identified hazards are used as input for a commercial risk assessment software program (*RiskAnalyst*) offered and administrated by Dynamic Risk Assessment Systems, Inc. The Operator has segmented this pipeline system into logical and logistical segments. This dynamic segmentation allows the risk values of individual segments to be calculated so that the overall risk of one segment to another can be compared. The hazards input into the program include: internal corrosion, external corrosion, stress corrosion cracking, manufacturing, construction, equipment and weather-related and outside forces.

The Operator's integrity management team has recognized the possibility of internal corrosion and has committed to implement a corrosion control program on all pipelines. The program would follow the Operator's Standard Operating Procedure (SOP) Volume 2 – Corrosion, 2-3010 Internal Corrosion Monitoring and Mitigation which includes maintenance pigging and analysis of any deposits resulting from the pipeline pigging. The pigging program would have a targeted frequency of twice per year per pipeline segment, but ultimately the frequency for each pipeline would be assessment based. The integrity management team also indicated that during the harmonization and revision of the IMP, Section 8.3.2 Internal Corrosion would be revised from “internal corrosion is not considered a viable threat” to reflect that there is some evidence that internal corrosion should be considered, and thus mitigated. Based on the evidence presented to the Board during the audit, the Board is of the opinion that internal corrosion will be appropriately monitored

² Hazard: Source or situation with a potential for harm in terms of injury of ill health, damage to property, damage to workplace environment, or a combination of these. Risk: Combination of the likelihood and consequence(s) of a specified hazardous event occurring

<p>and mitigated.</p> <p>Based on documents reviewed and interviews, the Operator was able to demonstrate that it has a program to identify its hazards and associated risk and mitigate the risk appropriately.</p>
<p>Compliance Status: Compliant</p>
<p>2.2 Legal Requirements</p> <p>Expectations: The company shall have a verifiable process for the identification and integration of legal requirements into its management and protection programs. The company should have a documented procedure to identify and resolve non-compliances as they relate to legal requirements which includes updating the management and protection programs as required.</p>
<p>References:</p> <p>OPR-99 sections 4, 6, 40 and 41(1) CSA Z662-07 Clause 10.14</p>
<p>Assessment:</p> <p>As part of an Operations and Maintenance (O&M) Agreement between EBPC and its Operator, the Operator is implementing and maintaining the integrity management program (IMP).</p> <p>The Operator's Operations and Maintenance Specifications Manual (O&MSM), Section 00 Forward, recognizes the applicable pipeline codes and regulations (including all applicable Canadian and United States (U.S.) codes). The IMP, Section 1.1 states "This Integrity Management Program has been developed in accordance with the guidelines of CSA Z662-07 Annex N and the Onshore Pipeline Regulations – 1999". While CSA Z662-07 Annex N is not a mandatory requirement for pipelines regulated by the NEB, voluntary adoption of its Guidelines for Integrity Management Programs provides a comprehensive framework for the structure and evaluation of the IMP. The Operator utilizes SOPs which describes in detail its IMP. The SOPs are being revised against all its applicable regulatory requirements and best practices (Canadian and U.S.).</p> <p>Based on documents reviewed and interviews with operations staff, the Operator was able to demonstrate that it had identified its legal requirements and had integrated its regulatory obligations into the IMP.</p>
<p>Compliance Status: Compliant</p>
<p>2.3 Goals, Objectives and Targets</p> <p>Expectations: The company should have goals, objectives and quantifiable targets relevant to the risks and hazards associated with the company's facilities and activities (i.e. construction, operations and maintenance). The objectives and targets should be measurable and</p>

consistent with the Policy and legal requirements and ideally include continual improvement and prevention initiatives, where appropriate.
References: OPR-99 sections 40, 47 and 48 CSA Z662-07 Clauses 10.2.2 (h) (ii) and 10.14.1
Assessment: As part of an Operations and Maintenance (O&M) Agreement between EBPC and its Operator, the Operator is implementing and maintaining the integrity management program (IMP). The IMP, Section 2: Corporate Policies, Objectives and Organization, and Subsection 2.1 Policies and Objectives, states that the “pipeline integrity objectives are established as part of an ongoing process to develop short term (1-4 years) and long term (5-10 year) plans and budgets for all integrity-related program development, hazard identification, inspection and investigation, and maintenance activities for all pipelines included within the scope of this document”. The IMP Section 2.3, Subsection 2.3.2: Performance Measures details EBPC’s Performance Plan which determines if the objectives of the IMP are being achieved and if pipeline integrity is being improved through the IMP. Through collection and analysis of performance data which is collected semi-annually, demonstrate that the IMP is being executed as planned. Performance Report from 2009 inclusive was reviewed and found to be in compliance with the expectations of the audit. Based on documents reviewed and interviews, the Operator was able to demonstrate that it has goals, objectives and targets to continually improve upon its IMP.
Compliance Status: Compliant
3.0 IMPLEMENTATION 3.1 Organizational Structure, Roles and Responsibilities Expectations: The company shall have an organizational structure that allows its management and protection programs to effectively function. The company should have clear roles and responsibilities, which may include responsibilities for the development, implementation and management of the management and protection programs.
References: OPR-99 sections 40, 47 and 48 CSA Z662-07 Clauses 10.2.1, 10.2.2 (b) and 10.14

Assessment:

As part of an Operations and Maintenance (O&M) Agreement between EBPC and its Operator, the Operator is implementing and maintaining the integrity management program (IMP).

The Operator's organizational structure, roles and responsibilities are detailed in several documents. The IMP, Section 2.2: IMP Administration and Responsibilities and Subsection 2.2.1: Pipeline Integrity Oversight Committee provides a high level outline of the functional relationships for the IMP.

The Operator's Operations and Maintenance Specifications Manual (O&MSM), Section 00, Reference 05 also outlines the organizational structure of overall pipeline operation including management, field personnel and field staff and establishes reporting relationship of all levels of staff and the inter-relationship of all work functions.

Twelve (12) organization charts were provided that delineated the structure and reporting relationships, including specific roles and responsibilities for the IMP. Interviewees specifically responsible for the IMP provided a clear understanding of their responsibilities for the development, management and implementation of the various facets of the IMP.

Based on documents reviewed and interviews, the Operator was able to demonstrate that it has an organizational structure that allows it to implement its IMP appropriately and as designed.

Compliance Status: Compliant**3.2 Management of Change**

Expectations: The company shall have a management of change program. The program should include:

- identification of changes that could affect the management and protection programs;
- documentation of the changes; and
- analysis of implications and effects of the changes, including introduction of new risks or hazards or legal requirements.

References:

OPR-99 section 6
CSA Z662-07 Clauses 10.2.2(g)

Assessment:

As part of an Operations and Maintenance (O&M) Agreement between EBPC and its Operator, the Operator is implementing and maintaining the integrity management program (IMP).

The IMP, Section 6: Management of Change (MOC) addresses the requirements for the IMP and is intended to cover physical, procedural, technical and organizational changes that may impact the pipeline system. The MOC process describes in detail the types of changes that could be of impact to the pipeline system as well as the critical elements of change management. Section 6.3.1 of the IMP documents the MOC roles and responsibilities within the organization from a functional standpoint and includes an MOC process flow diagram describing the interrelationship between those roles and responsibilities.

Appendix 2 of the IMP contains the instructions for the Record of Change Form (Figure 6) with functional responsibilities and chronological sequencing of the procedures outlined in Annex N.8.1. While CSA Z662-07 Clause 10.2.2 (g) requires a (generic) MOC process, EBPC has voluntarily chosen to incorporate CSA Z662-07 Annex N, Section N.8.1 and N.8.2 into its IMP which include more specific and detailed MOC requirements. On a more local level, the Operator's Annual Corrosion Review Meeting identifies current items requiring change, determines the type of remedial actions required and follows-up / resolves integrity related MOC issues.

Based on documents reviewed and interviews with operations staff, the Operator was able to demonstrate that it has an effective MOC process to identify, document and analyze changes that could affect the IMP.

Compliance Status: Compliant**3.3 Training, Competence and Evaluation**

Expectations: The company shall have a documented training program for employees and contractors related to the company's management and protection programs. The company shall inform visitors to company maintenance sites of the practices and procedures to be followed. Training requirements should include information about program-specific policies. Training should include emergency preparedness and environmental response requirements as well as the potential consequences of not following the requirements. The company should determine the required levels of competency for employees and contractors. Training shall evaluate competency to ensure desired knowledge requirements have been met. Training programs should include record management procedures. The training program should include methods to ensure staff remains current in their required training. The program should include requirements and standards for addressing any identified non-compliances to the training requirement.

References:

OPR-99 sections 4, 18, 29 and 46
CSA Z662-07 Clauses 10.2, 10.5 and 10.14

Assessment:

As part of an Operations and Maintenance (O&M) Agreement between EBPC and its Operator, the Operator is implementing and maintaining the integrity management program (IMP).

The IMP, Section 5: Competency and Training recognizes the increasingly complex nature of pipeline systems and the associated maintenance, inspection and monitoring requirements. The Operator also recognizes the need for personnel involved in the pipeline integrity program to possess highly specialized skills and that staff will be required to demonstrate competence in the areas for which they are responsible.

The Operator has classified personnel involved in the planning and execution of the IMP into General Service Providers and Critical Service Providers. The former consists of personnel involved in general activities and the latter consists of personnel involved in the execution of specialized pipeline inspection and maintenance activities. Technical competency requirements for both groups are based on an analysis of an individual's present or expected involvement in basic or advanced aspects of the IMP activities. Following the analysis and assessment of basic training needs, the design and planning of training is conducted regularly, with training sessions scheduled no less frequently than annually.

Training and qualifications for Critical Service Providers includes Brunswick Pipeline staff, vendors and contractors. These include: in-line inspection (ILI), engineering and risk assessments, non-destructive testing, stress corrosion cracking (SCC) and corrosion investigations, mechanical or materials defect assessments, pipeline defect repair, field recoating, hot taping and maintenance welding. Where industry standards or certification are an applicable aspect in the qualification and evaluation of competency, the Operator includes these requirements for staff or contract personnel. These include: Professional Engineering Associations, Certified Engineering Technicians/Technologists, Non-Destructive Examination (NDE) service providers having CGSB Level II or III in MPI, UT or radiography and SCC.

Management responsible for the IMP are required to provide relevant support for both the trainers and trainees with respect to equipment, software and opportunities to exercise the competencies. The audit program as outlined in Section 15.4 of the IMP must include in its scope, evaluation of the effectiveness of the training program and ensure that the objectives and expectations of the Training Program are being achieved. Documents and records of the completed Training Program for all Operator staff with specific O&M responsibilities for the Brunswick Pipeline are maintained in the local area offices.

Based on documents reviewed and interviews with operations staff, the Operator was able to demonstrate that it has a training program for its staff and contractors as it relates to its IMP.

Compliance Status: Compliant

3.4 Communication

Expectations: The company should have an adequate, effective and documented communication process(es):

- to inform all persons associated with the company's facilities and activities (interested persons) of its management and protection programs policies, goals, objectives and commitments;
- to inform and consult with interested persons about issues associated with its operations;
- to address communication from external stakeholders;
- for communicating the legal and other related requirements pertaining to the management and protection programs to interested persons;
- to communicate the program's roles and responsibilities to interested persons.

References:

OPR-99 sections 4, 18, 28, 29, 40, 47 and 48

CSA Z662-07 Clauses 10.2.2 (d) and 10.14

Assessment:

As part of an Operations and Maintenance (O&M) Agreement between EBPC and its Operator, the Operator is implementing and maintaining the integrity management plan (IMP).

The IMP includes sections that document relevant aspects of its integrity programs. Examples of the most relevant of these to communication are: Section 1: IMP Scope; Section 2: Corporate Policies, Objectives and Organization; Subsection 2.2.2.6 Administrative/Technical/Regulatory Document Teams with eight tables outlining the functional roles and responsibilities; Subsection 2.3.2 Performance Measures; Section 3: Documentation and Information Methods; Section 6: Management of Change Plan which includes Table 2 Responsibilities for Providing Approvals for Change and Section 11: Integrity Management Program Planning.

The IMP document, in addition to the SOP's, provide sufficient detail to support the effective implementation of the IMP elements as well as ensuring that the inspection, measurement, monitoring and maintenance activities are conducted in accordance with EBPC's specifications.

Although there are several formalized communication mechanisms being implemented for the IMP, the Operator could not demonstrate that there is an overall formalized and implemented communication plan that outlines the content and required distribution of various types of information to appropriate parties. While interviews confirmed communication is occurring through technical networks and through the means identified above, without a formal communication plan, the Operator cannot ensure that all

stakeholders and interested parties outside of the Integrity program are receiving the appropriate information in a timely fashion. For example, a formalized communication would identify what IMP information needs to be communicated to management to assist in planning.

Based on documents reviewed and interviews with operations staff, the Operator was able to demonstrate that it has effective communication to inform all interested persons of activities related to its IMP. The Board recommends that the Operator include identified IMP information in the overarching formalized communication plan.

Compliance Status: Compliant with recommendation

3.5 Documentation and Document Control

Expectations: The company should have documentation to describe the elements of its management and protection programs- where warranted. The documentation should be reviewed and revised at regular and planned intervals. Documents should be revised immediately where changes are required as a result of legal requirements or where failure to make immediate changes may result in negative consequences. The company should have procedures within its management and protection programs to control documentation and data as it relates to the risks identified in element 2.0.

References:

OPR-99 sections 4, 27, 47, 48
CSA-Z662 Clauses 10.2.2 (e) (f), 10.3.1.1 (d) and 10.14.1

Assessment:

As part of an Operations and Maintenance (O&M) Agreement between EBPC and its Operator, the Operator is implementing and maintaining the integrity management plan (IMP).

During a preceding audit of the Operator for the M&NP Pipeline, its pigging procedures as, documented, were compared to actual field practices. SOP, Volume 1 – Pipeline, Procedure Number 1-5030 states “The following procedures for running pigs demonstrate general practices only; operating personnel shall develop and implement site specific procedures and thoroughly familiarize themselves with the requirements of these procedures prior to their use and operation.” Additionally, pigging has been recognized as a hazard in the O&MSM, Section 04: Cleaning, Testing and Purging, Reference 05: Pipeline Pigging – General where it states that “Pigging is extremely dangerous when done incorrectly”. Item #3 in this document states “The pigging barrel is a pressure vessel. Operations involving opening of the door should be done with extreme care as the energy stored in high-pressure gas is sufficient to tear the door off its hinges and launch a pig out of the barrel at high velocity. Assurance that the barrel is fully vented is the pigging crew’s responsibility and is a major factor to their personal safety.”

At this point, due to the short time in operation, the Operator has not performed pipeline pigging (cleaning runs or ILI) on the Brunswick Pipeline. In the future, as a result of the internal corrosion program to be implemented in 2011, maintenance pigging programs will be initiated. This increased exposure to operations personnel necessitates detailed, accurate and complete procedures for each pig launcher and receiver to identify site specific hazards and mitigate the risks associated with pipeline pigging.

A site inspection of the pig launcher and receiver at the Red Head facility revealed that both the launcher and receiver had been constructed with concentric versus eccentric reducers. While this type of design does not contravene any code or standard, it can pose a problem during pig launching. The concentric reducer makes it difficult to achieve a tight seal on the front pig cup because the pig is tilted rather than level in the launch position. The lack of a tight seal, especially in a gas line, can mean that repeated attempts are required to seal the pig in the reducer to achieve a successful launch. Repeatedly pressurizing, depressurizing and purging the pig launcher can lead to operator frustration and possibly to taking shortcuts in the pigging procedure. These factors can increase the possibility of injury to operations personnel. The Operator was unaware of this potential situation when Board auditors identified it to operations personnel during the audit.

The Board recommends that in order to prevent this situation from occurring in future pigging operations, when the site specific pigging procedures are developed and documented for Brunswick Pipeline facilities, they should incorporate special instructions to operations personnel to address this unique design of its facilities.

Compliance Status: Compliant with recommendation

3.6 Operational Control-Normal Operations

Expectations: The company should establish and maintain a process to develop, implement and communicate mitigative, preventive and protective measures to address the risks and hazards identified in elements 2.0 and 3.0. The process should include measures to reduce or eliminate risks and hazards at their source, where appropriate.

References:

OPR-99 sections 4, 27, 36, 37, 39 and 40
CSA Z662-07 Clause 10

Assessment:

As part of an Operations and Maintenance (O&M) Agreement between EBPC and its Operator, the Operator is implementing and maintaining the integrity management program (IMP).

The O&MSM contains numerous sections that address implementation of the technical requirements of OPR-99 section 36. These requirements include: maintaining communication facilities, periodic testing of instruments and equipment, continually recording

suction and discharge pressures, marking the open and closed positions of critical valves and posting signage at facilities boundaries for critical contact information.

The IMP includes 15 Sections and 2 Appendices and addresses the requirements of OPR-99 section 27 requiring the development, regular review and updating of manuals to provide information and procedures to promote efficiency in the operation of its pipeline and facilities. The hazards identified in Section 8: Hazard Identification and Control and Section 9: Risk Assessment are effectively addressed in Section 10: Hazard Control and Risk Reduction; Section 12: Integrity Assessment Methods; Section 13: Inspections, Testing, Patrols and Monitoring and Section 14: Mitigation and Repair.

Based on documents reviewed and interviews with operations staff, the Operator was able to demonstrate that it has a process to address the risks and hazards associated with its facilities and activities.

Compliance Status: Compliant

3.7 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 emergency events).

References:

Integrity:

OPR-99 sections 4, 32, 37, 40 and 52

CSA Z662-07 Clauses 10.2, 10.3.2 and 10.14

Assessment:

As part of an Operations and Maintenance (O&M) Agreement between EBPC and its Operator, the Operator is implementing and maintaining the integrity management program (IMP).

The O&MSM Section 14, Reference 01: Contingency Plan is intended to provide communications and gas control operations for all pipeline facilities operated by the Operator. The communications systems are comprised of a wholly-owned and controlled satellite system to ensure ideal communication along the pipeline route. A 1-888 emergency telephone system has been put into place to be used by the public. The number is displayed on all EBPC line signs, valve sites, stations and related facilities. An after-hours answering service receives calls and communicates specific needs to the appropriate Operations Center or on call technician.

As per CSA Z662-07 Clause 10.3.2.5, the Operator has made provisions for pre-tested pipe and related fittings to be stored at one or more of the Operation Centers or valve sites along the pipeline route or use in emergency repairs. Site visits confirmed the storage of pipe and fittings.

Section 14, Reference 02 covers emergency and planned pipeline shutdown requirements and References 03 to 06 inclusive provide pipeline schematics with mainline valve identification.

Based on documents reviewed and interviews with operations staff, the Operator was able to demonstrate that it has plans for upset or abnormal operating conditions.

Compliance Status: Compliant

4.0 CHECKING AND CORRECTIVE ACTION

4.1 Inspection, Measurement and Monitoring

Expectations: The company shall develop and implement surveillance and monitoring programs. These programs should address contract work being performed on behalf of the company. These programs should include qualitative and quantitative measures for evaluating the management and protection programs and should, at a minimum, address legal requirements as well as the risks identified as significant in elements 2.0 and 3.0. The company should integrate the surveillance and monitoring results with other data in risk assessments and performance measures, including proactive trend analyses. The company shall have documentation and records of its surveillance and monitoring programs.

References:

OPR-99 sections 4, 27, 28, 36, 37, 39, 47, 48, 53 (1) and 54 (1)
CSA Z662-07 Clauses 9 and 10

Assessment:

As part of an Operations and Maintenance (O&M) Agreement between EBPC and its Operator, the Operator is implementing and maintaining the integrity management program (IMP).

The IMP, Section 13: Inspection, Testing, Patrols and Monitoring outlines the procedures to conduct inspections, testing, patrols and monitoring in accordance with Clauses 9 and 10 of CSA Z662-07. The detailed procedures are contained in the Operator's SOPs. The SOP's have been "harmonized" such that the requirements for the U.S. and Canadian regulators are specified in terms of specific tasks and the frequencies of those tasks. The SOP's have been organized to address threat specific requirements. For example, IMP Section 1.6: Inspection and Damage Prevention contains ten (10) procedures covering pipeline Right-of-Way (RoW) patrols and leakage

surveys. IMP Section 2.2: External Corrosion includes thirty (30) detailed procedures with the focus on cathodic protection inspection, testing and monitoring. Review of the Annual Cathodic Protection Survey Report for 2009 indicated that the survey scope (test points) and results (NACE criteria) met regulatory requirements.

CSA Z662-07 Clause 10.6.1.2 states that the frequency of pipeline patrolling shall be determined by considering such factors as: operating pressure, pipeline size, population density, etc., which are risk-based considerations. The inclusion of risk-based frequencies as required by CSA Z662-07 is evident in SOP 1-6010 Pipeline Patrol and Leakage Survey Frequency Criteria, which specifies bi-weekly aerial RoW patrols.

To ensure appropriate documentation and records of the inspection, surveillance and monitoring programs, each SOP contains links imbedded in the electronic document to the “Reporting” and “Forms” requirements upon completion of the SOP tasks.

In terms of data integration and analysis, IMP Section 13.2: Evaluation of Inspection, Testing, Patrol and Monitoring Results stipulates that upon completion of each task, the results are evaluated to determine whether a potential threat exists, and when the results indicate the presence of conditions that might lead to a failure incident with significant consequences or to an external interference incident, an engineering assessment is to be performed in accordance with CSA Z662-07 Clause 10.14.

In terms of risk assessment, IMP Section 9.2.2: Review of Previous Integrity Management Processes states that information gained from integrity audits, performance metrics, integrity assessments and mitigative actions (i.e. Inspection, Testing, Patrols and Monitoring) over the previous year will be incorporated into the annual updating of the risk information for each threat.

Based on documents reviewed and interviews with operations staff, the Operator was able to demonstrate that it has surveillance and monitoring programs to address its hazards and risks as it relates to the IMP.

Compliance Status: Compliant

4.2 Corrective and Preventive Actions

Expectations: The company shall have a process to investigate incidents or any non-compliance that may occur. The company shall have a process to mitigate any potential or actual issues arising from such incidents or non-compliances. Such mitigation may include appropriate timing and actions for addressing the issues that arise. The company shall demonstrate that it has established a documented procedure to:

- set criteria for non-compliance;
- identify the occurrence of any non-compliances;

- investigate the cause(s) of any non-compliances;
- develop corrective and/or preventative actions; and
- effectively implement the required corrective and/or preventative actions.

The company should develop procedures to analyze incident data in order to identify deficiencies and opportunities for improvement in its management and protection programs and procedures.

References:

OPR-99 sections 4, 6 and 52

CSA Z662-07 Clauses 10.2.2 (g) and (h), 10.3 and 10.14

Assessment:

As part of an Operations and Maintenance (O&M) Agreement between EBPC and its Operator, the Operator is implementing and maintaining the integrity management program (IMP).

IMP, Section 7: Incident Investigations details the requirements for incident reporting, on-site investigation, follow-up investigation and inclusion of any recommendations to the IMP that would reduce the likelihood of such an incident recurring. Section 2.3.2 Performance Measures includes threat specific incident data that would constitute non-compliances.

The data is collected, monitored, reviewed and investigated by the Pipeline Integrity Oversight Committee on a semi-annual basis. An internal report is presented and reviewed by senior management as well as the integrity management staff. While no incidents had occurred that required action for the Operator, it is noted that the annual Corrosion Review Meeting has a standing agenda item of Review of Action Items, which addresses incident related action items from previous years that are to be resolved.

Based on documents reviewed and interviews with operations staff, the Operator was able to demonstrate that it has an appropriate process for investigating incidents and non-compliances.

Compliance Status: Compliant

4.3 Records Management

Expectations: The company shall establish and implement procedures to ensure that the records supporting the management and protection programs are retained, accessible and maintained. The company shall, as a minimum, retain all records for the minimum lengths of time as required by the applicable legislation, regulation and standards incorporated by reference into the regulation.

References:

OPR-99 sections 4, 41 and 56

CSA Z662-07 Clauses 9.11, 10.2, 10.3, 10.4 and 10.14

Assessment:

As part of an Operations and Maintenance (O&M) Agreement between EBPC and its Operator, the Operator is implementing and maintaining the integrity management program (IMP).

The IMP, Section 4: Integrity Management Program Records summarizes the record management system whereby the records of integrity management activities and related operations and maintenance are maintained in many files and types of formats. These records are completed and retained as per the requirements of the individual related procedures. The records related to the pipeline design, construction, operation and maintenance are prepared, managed and maintained in accordance with its record retention rules.

The types of records that are included in the records management program include:

- Pipeline design records
- Materials standards and specifications
- Material test reports
- Joining and inspection records
- Coating inspection records
- Pressure test records
- Pipeline environment records
- Pipeline location records
- Class location records
- Cathodic protection records
- Risk assessment records
- Repair records
- Other records covering implementation and completion of risk mitigation activities.

An example of one of these records that was reviewed was the Annual Cathodic Protection Survey for 2009 which included all of the required data, including pipeline test points, inspection date, pipe-to-soil cathodic protection potential measurements and sign off by the operations technician.

Based on documents reviewed and interviews with operations staff, the Operator was able to demonstrate it has a records management program to ensure records relating to the Integrity Program are retained as required, accessible and maintained.

Compliance Status: Compliant
<p>4.4 Internal Audit</p> <p>Expectations: The company shall develop and implement a documented process to undertake audits of its management and protection programs and procedures. The audit process should identify and manage the training and competency requirements for staff carrying out the audits. These audits shall be conducted on a regular basis.</p>
<p>References:</p> <p>OPR-99 sections 4, 53 and 55 CSA Z662-07 Clauses 10.2.2 (c) and (h) (iii)</p>
<p>Assessment:</p> <p>As part of an Operations and Maintenance (O&M) Agreement between EBPC and its Operator, the Operator is implementing and maintaining the integrity management program (IMP).</p> <p>The IMP, Section 15: IMP Review & Evaluation, Subsection 15.4 Audits, specifies that both internal and external audits will be utilized to formally validate and improve its IMP. While CSA Z662-07 Annex N is not specifically a requirement of the NEB, EBPC has chosen to adopt it and therefore must meet the requirements of Annex N.17.2 (a) through (f) which include: audit scope and objectives, audit frequency and timing, responsibilities for managing and performing audits, auditor independence, auditor competency and audit procedures.</p> <p>The Board recommends that the Operator amend its internal audit program to ensure requirements identified in OPR-99 and other referenced and regulatory documents are appropriately defined (see also Element 2.2 Legal Requirements) and that internal audits incorporate all regulatory requirements that apply to the Brunswick Pipeline and facilities. Further, during the audit, EBPC staff provided documentation of its parent company's internal environmental management system which includes internal audit requirements. If EBPC implements its contemplated practices it could result in an effective and fully compliant process.</p> <p>Based on documents reviewed and interviews with operations staff, the Operator was able to demonstrate that it has a process to undertake audits of its IMP as it relates to the Brunswick Pipeline system and it is recommended that EBPC complete an audit of its IMP as per its IMP requirements in the near future.</p>
Compliance Status: Compliant with recommendation

5.0 MANAGEMENT REVIEW

Expectations: Senior management should formally review the management and protection programs for continuing suitability, adequacy and effectiveness. The review should be based on appropriate documentation and records including the results of the surveillance, monitoring and audit programs. This review should be formal and documented and should occur on a regular basis. The management review should include a review of any decisions, actions and commitments which relate to the improvement of the programs and the company's overall performance.

References:

OPR-99 sections 4, 40 and 55

CSA Z662-07 Clauses 10.2.2 (h) (iii) and 10.14.1

Assessment:

See Appendix VII for the assessment of this element.

Compliance Status: N/A

APPENDIX II

EBPC SAFETY PROGRAM AUDIT EVALUATION TABLE

<p>1.0 POLICY AND COMMITMENT</p> <p>1.1 Policy and Commitment Statements</p> <p>Expectations: The company shall have a policy approved and endorsed by senior management (the Policy). It should include goals and objectives and commit to improving the performance of the company.</p>
<p>References:¹</p> <p>OPR-99 sections 4 and 7</p> <p>CSA Z662-07 Clause 10.2.2</p> <p>CLC Part II 125(1)(d)(i)-(ii), 125(1)(z.09)</p>
<p>Assessment:</p> <p>Through the Operations and Maintenance Agreement (O&M), EBPC has adopted the Operator’s Environment Health and Safety (EHS) policy, performance standards and safety action plan. EBPC demonstrated that it had its own policy statement applicable to its facilities. Further, EBPC identified that as part of its management oversight of the facilities, it was comparing the policy with that of the Operator to ensure consistency.</p> <p>The EHS policy includes the following principles:</p> <ul style="list-style-type: none"> • Accountability • Stewardship • Standards • Performance • Communication <p>The EHS Management System (MS) outlines how employees and contractors are expected to meet the desired level of EHS performance for the following elements:</p> <ol style="list-style-type: none"> 1. Roles, responsibilities and accountabilities

¹ Each “Reference” in this table contains specific examples of the “legal requirements” applicable to each element but are not necessarily a complete list of all applicable legal requirements.

2. Risk management
3. Emergency Preparedness & Response
4. Compliance management
5. Supplier, Contractor and Partner Relationships
6. Stewardship and community relations
7. Goal setting and performance measurement
8. Incident reporting and investigation
9. Assessment and management system review

Based on interviews and documents reviewed, the Board verified that EBPC has adopted the Operator's EHS MS and that the commitment to managing its safety hazards and risks was visible at all levels within the organization.

Compliance Status: Compliant

2.0 PLANNING

2.1 Hazards Identification, Risk Assessment and Control²

Expectations: The company shall be able to demonstrate a procedure to identify all possible hazards. The company should assess the degree of risk associated with these hazards. The company should be able to support the rationale for including or excluding possible risks in regard to its environment, safety, integrity, crossings and awareness and emergency management and protection programs (management and protection programs). The company should be able to implement control measures to minimize or eliminate the risk.

References:

OPR-99 sections 4(2) and 47
 CSA Z662-07 Clause 10.2
 CLC Part II 125.(1)(s)(z.03)-(z.05), 125(1)(z.13)-z.16)
 COSHR 19.1(1), 19.3(1)-(2), 19.5(1)-(5)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EHS MS.

The Operator uses a Risk Inventory and Job Safety Analysis (JSA) to assess EHS risk for various duties. The risk inventory method

² Hazard: Source or situation with a potential for harm in terms of injury of ill health, damage to property, damage to workplace environment, or a combination of these. Risk: Combination of the likelihood and consequence(s) of a specified hazardous event occurring

involves discussions with EHS, Operations, Maintenance, and other site personnel around specific scenarios. For each identified scenario, the team discusses how workers could be injured or the environment damaged and then critically evaluates adequacy of existing controls. The JSA method integrates risk assessment and control to the particular task completed in order to identify controls at specific locations.

It was confirmed during field verification that the Operator incorporates existing procedures for completing Job Hazard Assessments; Hazard Identification and Reporting forms; Job Observation Checklists. Risk assessment workshops are held annually to support the risk management element of the EHS MS by establishing a forum to identify and evaluate EHS risks. Prior to the workshop, EHS personnel obtain feedback from across the organization, by interviewing a broad range of personnel. This data was used as the basis for the workshop.

In order to manage risks to contractors, the Operator has a health and safety management performance standard. This standard provides guidance for the registration, selection and oversight of all contractors performing work on the Brunswick Pipeline. A review and evaluation of contractor's health and safety work and communication plans are developed in advance of the work to ensure they are appropriate to the risks of the work. This review ensures adequate internal and external oversight controls are part of the project review. It was confirmed during document review and interviews that various methods of communicating the EHS requirements to employees and contractors are in place. Upon the completion of the contract, contractor performance is reviewed and documented.

The Operator was able to demonstrate through document review and interviews that hazard identification, risk assessments and controls are being conducted throughout the organization.

Compliance Status: Compliant

2.2 Legal Requirements

Expectations: The company shall have a verifiable process for the identification and integration of legal requirements into its management and protection programs. The company should have a documented procedure to identify and resolve non-compliances as they relate to legal requirements which includes updating the management and protection programs as required.

References:

OPR-99 sections 4, 6 and 47
CSA Z662-07 Clause 10.2.2 (g)
CLC Part II 125.(1)(v)
COSHR 19.1 (1)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is responsible for developing, implementing and maintaining the EHS MS.

During the audit it was identified that the Operator has developed a process which includes the identification and status of regulatory requirements and undertakings. An annual review is conducted of Standard Operating Procedures (SOPs) to ensure legislated requirements are met and a gap analysis is conducted by the Operator's United States (U.S.) based staff to determine any next steps which may be required. The Director, Regulatory Affairs & Government Relations is the primary point of contact with the NEB with regard to any compliance issues or changes to regulatory requirements. Upon receiving notification/correspondence from the NEB, the Director, Regulatory Affairs & Government Relations forwards this information to the Operator as appropriate. Safety compliance issues and identified gaps are tracked within the appropriate management team of the operator as well as by the EHS Department and monitored by EBPC.

Regardless of the development and intent of the processes described above, the Operator was unable to demonstrate the processes were being consistently implemented. During the audit, the Operator was not able to demonstrate that its processes included all of the Canadian OHS legislation which applied. For example, it was noted during document review and interviews that the Canada Labour Code Part II (CLC Part II) and the Canada Occupational Health and Safety Regulations (COSHR) were not included in any of the reference documents, making it difficult to verify whether the relevant requirements had been identified and integrated into these documents. As another significant example, at the time of the audit, the Operator was not able to demonstrate that it has a process that would meet the requirement to develop and implement a "Violence Prevention in the Workplace" program as required by CLC Part II 125.1(z.16) and COSHR Section 20 which came into effect in 2008 (SOR/2008-148, s. 1). Interviews with the Operator's Human Resources personnel confirmed that the 'Violence in the Workplace Policy and Program' is currently under development; however, as the program was in the early stages of development, it could not be assessed for adequacy.

The Operator did not demonstrate that it has an effective and fully implemented process to identify and integrate all appropriate occupational health and safety legislation into its Safety Program.

Compliance Status: Non-compliant**2.3 Goals, Objectives and Targets**

Expectations: The company should have goals, objectives and quantifiable targets relevant to the risks and hazards associated with the company's facilities and activities (i.e. construction, operations and maintenance). The objectives and targets should be measurable and consistent with the Policy and legal requirements and ideally include continual improvement and prevention initiatives, where

appropriate.
References: OPR-99 section 47 CSA Z662-07 Clause 10.2.2 (h) (ii) COSHR 19.1 (1)
Assessment: As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EHS MS. The EHS policy contains safety principles for the EHS MS. Action plans and objectives are set out by the Operations Committee, EHS Committee, management and staff personal safety action plans. The membership of the Operations Committee and the EHS Committee consists of Vice Presidents of the various divisions. The committee provides reports/updates to senior management to provide a clear picture of the work of the committees. Employee objectives are discussed with their supervisor at the beginning of the year, at least once during the year and again at the end of the year when the past year's performance is evaluated and objectives are established for the next year. Safety goals, targets and objectives have been identified for all staff and are included in individual job descriptions. Safety performance is included in the overall employee objectives and employees are provided recognition in meeting its EHS performance objectives known as the "Short Term Incentive Programs". The Operator was able to demonstrate through documents and interviews that objectives and targets have been set relevant to its safety hazards and risks.
Compliance Status: Compliant
3.0 IMPLEMENTATION 3.1 Organizational Structure, Roles and Responsibilities Expectations: The company shall have an organizational structure that allows its management and protection programs to effectively function. The company should have clear roles and responsibilities, which may include responsibilities for the development, implementation and management of the management and protection programs.
References:

OPR-99 section 47
CSA Z662-07 Clauses 10.2.1 and 10.2.2 (b)
CLC Part II 125(1), 125.1, 134.1, 135(1)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EHS MS.

Overall accountability for EHS issues is maintained by the Environment Health and Safety Committee (EHSC), which is comprised of senior personnel as well as representatives from the Board of Directors. Quarterly EHS reports are reviewed by the EHSC. An EHS Management Team has been established with specific accountabilities for safety. The Board reviewed copies of job descriptions to confirm that specific safety-related responsibilities and accountabilities are identified.

Lines of reporting for safety issues are clearly outlined, and include reporting routes from the Operator's Vice President, Operations Northeast (NE) Transmission; Manager, NE-Health & Safety; and the EHS Support Specialist. The other line of reporting includes the Director EHS, Houston.

Following interviews and reviews of job descriptions, the Board identified one concern regarding the expectations of the role of the EHS Support Specialist. The workload for this senior position appears to be significant for one person to manage. It was noted that the safety management workload involved review and development of new practices and procedures and included oversight of activities involving contract management and on-sight activities.

The Board recommends that the Operator review the responsibilities of the EHS Support Specialist to ensure that environmental and safety protection is maintained and can remain effective.

Compliance Status: Compliant with recommendation

3.2 Management of Change

Expectations: The company shall have a management of change program. The program should include:

- identification of changes that could affect the management and protection programs;
- documentation of the changes; and
- analysis of implications and effects of the changes, including introduction of new risks or hazards or legal requirements.

References:

OPR-99 section 6
CSA Z662-07 Clause 10.2.2 (g)
CLC Part II 125.(1)(z.05)-(z.06)
COSHR 19.5(4), 19.6(2)

Assessment:

In regard to technical changes, EBPC indicated that it defers to the Operator as part of managing operations outlined in the O&M agreement. The Operator demonstrated that it has a Management of Change (MOC) procedure in place which outlines the process to be followed for identifying, assessing and implementing changes once they have been approved by the responsible individuals (EHS MS Management of Change Performance Standard 2.7).

Currently, the Operator staff is participating in a collaborative process to review all operational SOPs against all regulatory requirements and best practices (Canadian and U.S.). EHS is leading the process with support of Senior Management, and Regional subject matter experts.

The MOC process is partially implemented by various disciplines and programs within the organization. However, at the time of the audit, there was no evidence provided to demonstrate a fully documented and implemented MOC program.

The Operator could not demonstrate an adequate MOC for oversight of its activities or that there is an adequate fully implemented MOC process in place for EBPC facilities and activities to identify, document and analyze changes that could affect the EHS MS, including introduction of new risks, hazards or legal requirements.

Compliance Status: Non-compliant

3.3 Training, Competence and Evaluation

Expectations: The company shall have a documented training program for employees and contractors related to the company's management and protection programs. The company shall inform visitors to company maintenance sites of the practices and procedures to be followed. Training requirements should include information about program-specific policies. Training should include emergency preparedness and environmental response requirements as well as the potential consequences of not following the requirements. The company should determine the required levels of competency for employees and contractors. Training shall evaluate competency to ensure desired knowledge requirements have been met. Training programs should include record management procedures. The training program should include methods to ensure staff remains current in their required training. The program should include requirements and standards for addressing any identified non-compliances to the training requirement.

<p>References: OPR-99 sections 28, 29, 30 (b), 46, 47 and 56 CSA Z662-07 Clause 10.2.2 (c) CLC Part II 124, 125(1)(q), 125(1)(s), 125(1)(z), 125(1)(z.01), 125(1)(z.03) COSHR 10.14, 11.5(2), 11.11, 12.10(1.1)(a)(ii), 12.10(1.2), 12.15, 13.11, 14.23, 17.6(1), 20.10, 19.1(1), 19.2(2), 19.6</p>
<p>Assessment: According to the O&M agreement between EBPC and the Operator, the Operator is responsible for training of employees. The Operator has developed a safety training matrix that applies to employees assigned to operating and maintaining the Brunswick pipeline. This matrix consists of a list of core safety training courses and the frequency with which they are required. Some of the mandatory safety training is delivered online. Document review confirmed that the Operator maintains records of all training required and completed by all workers. Employees are provided with any updates to this matrix should additional training requirements be identified or should existing curriculums be changed. The Board also reviewed the Human Resources Orientation checklist which includes a safety training component that requires manager's sign off.</p> <p>The Operator was able to demonstrate that it has an adequate and effective safety training program which ensures employees are able to fulfill their roles and responsibilities.</p>
<p>Compliance Status: Compliant</p>
<p>3.4 Communication Expectations: The company should have an adequate, effective and documented communication process(es):</p> <ul style="list-style-type: none"> • to inform all persons associated with the company's facilities and activities (interested persons) of its management and protection programs policies, goals, objectives and commitments; • to inform and consult with interested persons about issues associated with its operations; • to address communication from external stakeholders; • for communicating the legal and other related requirements pertaining to the management and protection programs to interested persons; • to communicate the program's roles and responsibilities to interested persons.
<p>References: OPR-99 sections 18, 28, 29 and 47 CSA Z662-07 Clause 10.2.2 (d)</p>

CLC Part II 122.3 (1)- (2), 125(1)(d)-(f), 125(1)(s), 125(1)(z.03)-(z.11), 125(1)(z.14)-(z.15), 125(1)(z.17),-(z.19)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EHS MS.

The Operator was able to demonstrate that it employs many methods for communicating safety requirements with its internal and external stakeholders. Communication of safety information takes place during safety stand down meetings; quarterly employee meetings and safety updates; daily tailgate meetings; daily and weekly safety reports; NE Region Health and Safety Newsletters; monthly safety and communications meetings; monthly reports to EHS Corporate group; contract management activities, pre-job meetings, its intranet sites; etc.

Although there are several communication mechanisms in place, the Operator could not demonstrate that there is a formalized and implemented overarching communication plan that outlines the distribution of various types of information to appropriate parties. While interviews confirmed communication is occurring throughout technical networks and through the means identified above, without a formal communication plan, the Operator cannot ensure that all stakeholders and interested parties are receiving the appropriate information in a timely fashion.

Despite the documented communication which takes place during the various meetings. Within the safety program, the Board could not verify that a formalized communication plan exists within the organization that clearly identifies interested parties and pertinent safety information that is required to be communicated.

Compliance Status: Non-compliant

3.5 Documentation and Document Control

Expectations: The company should have documentation to describe the elements of its management and protection programs- where warranted. The documentation should be reviewed and revised at regular and planned intervals. Documents should be revised immediately where changes are required as a result of legal requirements or where failure to make immediate changes may result in negative consequences. The company should have procedures within its management and protection programs to control documentation and data as it relates to the risks identified in element 2.0.

References:

OPR-99 sections 27, 47 and 56
CSA Z662-07 Clause 10.2.2 (e) (f)

CLC Part II 125(1) (z.03)-(z.06), 125(1) (z.09), 125.1(d)-(e), 125.1(f), 135.1(9),
COSHR 1.5, 2.23, 4.6, 5.17, 5.18, 8.12, 8.14(4)-(7), 8.15, 10.3

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EHS MS which includes the management of operational documents and manuals.

It was confirmed that a comprehensive document management system is in place, which includes control and transmittal tracking of all safety related documents. The Board was able to verify that the document management system undergoes continual monitoring, evaluation and updating of documents when required.

However, during the document review, version control issues with selected safety program documents were identified. For example, although not the most current version of the standard, CSA Z662-03 was referenced in procedures throughout the Operations and Maintenance Manual. There was no evidence suggesting that the outdated reference was indicative of a systemic issue as the Integrity Management Program Manual and the Emergency Preparedness Manual referenced the CSA Z662-07.

It is recommended that the Operator update the Operations and Maintenance Manual to reflect the current CSA standard. This reference update ensures that users of the document can trace a requirement as referenced in the manual and obtain the most up-to-date requirements.

The Operator was able to demonstrate that it has adequate documentation and controls in place to ensure that the EHS MS provides the appropriate level of guidance to employees.

Compliance Status: Compliant with recommendation

3.6 Operational Control-Normal Operations

Expectations: The company should establish and maintain a process to develop, implement and communicate mitigative, preventive and protective measures to address the risks and hazards identified in elements 2.0 and 3.0. The process should include measures to reduce or eliminate risks and hazards at their source, where appropriate.

References:

OPR-99 sections 27-49
CSA Z662-07 Clauses 10.2.2 (f) and 10.3.1

CLC Part II 125.(1), 125.1
COSHR 19.1(1)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EHS MS.

The Operator uses a Health and Safety Standards Manual that contains procedures for controlling identified risks associated with tasks typically encountered by operations personnel. The procedures reference and acknowledge compliance with applicable legislation and with industry association best practices.

The audit confirmed that the risk assessment and Job Hazard Analysis that have been completed include various mitigating measures. These identified measures then form the basis of the procedures to ensure operational control is maintained.

An Operations Control Table is being developed by the Operator to provide procedural consistency across the business units. The Operations Control Table will be used in conjunction with the EHS Risk Registry Guide. The EHS Risk Registry provides a centralized summary of risk scenarios for review by Business Unit Leadership in setting priorities and allocating resources to adequately manage the EHS element of operational risk. Also the SOP harmonization project, which is underway to revise all SOPs against regulatory requirements and best practices (Canadian and U.S.), will be implemented to ensure all operations and maintenance activities are executed in compliance with the most stringent regulations and standards.

The Operator was able to demonstrate that it has a process to identify and reduce or eliminate hazards as appropriate.

Compliance Status: Compliant

3.7 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 (example, after emergency events).

References:

OPR-99 sections 32, 35 and 52
CSA Z662-07 Clause 10.3.2
CLC Part II 125(1)(o)
COSHR 17.4, 17.5, 19.1(1)

Assessment:

EBPC, in conjunction with the Operator, has developed and implemented an Emergency Preparedness and Response Plan. It was verified that worker safety issues associated with the emergency evacuation and muster locations are discussed during orientations and fire evacuation procedures are posted and tested to ensure the effectiveness of the safety measures. Emergency evacuation drills and mock exercises are held on a regular basis.

For more details on the Emergency Preparedness and Response Plan as it relates to the expectations of OPR-99, see Appendix IV: EBPC EPR Program Audit Evaluation Table.

Compliance Status: Compliant

4.0 CHECKING AND CORRECTIVE ACTION**4.1 Inspection, Measurement and Monitoring**

Expectations: The company shall develop and implement surveillance and monitoring programs. These programs should address contract work being performed on behalf of the company. These programs should include qualitative and quantitative measures for evaluating the management and protection programs and should, at a minimum, address legal requirements as well as the risks identified as significant in elements 2.0 and 3.0. The company should integrate the surveillance and monitoring results with other data in risk assessments and performance measures, including proactive trend analyses. The company shall have documentation and records of its surveillance and monitoring programs.

References:

OPR-99 sections 36, 39, 47, 53 (1) and 54 (1)

CSA Z662-07 Clauses 10.2.2 and 10.14.1

CLC Part II 125(1)(c), 134.1(4)(d), 135(7)(k), 136(5)(g), 136(5)(j)

COSHR 4.5, 4.6, 5.10, 6.10(3), 10.18, 12.3, 12.14, 14.20, 14.21, 14.23, 15.6, 17.3, 17.9

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EHS MS.

As indicated in other sections of this report, the Operator is holding various meetings and completing reports which monitor and document the EHS MS safety component, including:

- Daily and monthly progress reports;
- Daily and weekly safety inspection reports;
- Daily tool box meetings;
- Weekly all staff meetings;
- Weekly fire drills;
- Weekly behaviour based inspections;
- Incident reporting;
- Incident investigation when required; and
- Completion of Incident Without Loss (IWOL) tracked on Environment Performance and Safety System (EPASS).

Document review confirmed that actions resulting from the above listed activities are assigned and tracked to ensure any issues are addressed and reported.

The Board verified that the Operator has adequate processes in place to monitor and measure its safety program. The Board recommends that the Operator consider this information during the development of the formal communication plan (see Element 3.4).

Compliance Status: Compliant with recommendation**4.2 Corrective and Preventive Actions**

Expectations: The company shall have a process to investigate incidents or any non-compliance that may occur. The company shall have a process to mitigate any potential or actual issues arising from such incidents or non-compliances. Such mitigation may include

appropriate timing and actions for addressing the issues that arise. The company shall demonstrate that it has established a documented procedure to:

- set criteria for non-compliance;
- identify the occurrence of any non-compliances;
- investigate the cause(s) of any non-compliances;
- develop corrective and/or preventative actions; and
- effectively implement the required corrective and/or preventative actions.

The company should develop procedures to analyze incident data in order to identify deficiencies and opportunities for improvement in its management and protection programs and procedures.

References:

OPR-99 sections 6 and 52

CSA Z662-07 Clause 10.2.2 (g) and (h)

CLC Part II 125(1)(c), 125(1)(o), 125.1(f), 134.1(4)(d), 135(7)(e), 135(7)(j), 136(5)(g)

COSHR sections 2.27, 7.3, 10.4, 10.5, 15.4, 19.1(1)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EHS MS.

The Operator has developed and implemented a comprehensive incident investigation process is in place. The incident reporting and investigation process includes significant near misses and includes contractors in incident investigations, when appropriate. The investigation process identifies root causes and trends that lead to corrective and preventive action. The Operator tracks the actions until completion and verifies their effectiveness. Incidents are analyzed to detect patterns or trends to anticipate and prevent future incidents. The incidents and accidents are recorded and reported as per policy. Best practices and lessons learned are shared with others who can benefit.

The Board verified that the Operator has adequate processes to ensure safety related incidents are investigated and the appropriate measures are taken to correct or prevent further deficiencies in its execution of the EHS MS.

Compliance Status: Compliant

4.3 Records Management

Expectations: The company shall establish and implement procedures to ensure that the records supporting the management and

<p>protection programs are retained, accessible and maintained. The company shall, as a minimum, retain all records for the minimum lengths of time as required by the applicable legislation, regulation and standards incorporated by reference into the regulation.</p>
<p>References: OPR-99 sections 47 and 56 CSA Z662-07 Clause 10.2.2 (e) CLC Part II 125(1)(g), 1.5, 2.23, 2.24, 2.27(7), 4.6 COSHR 5.17, 5.18, 6.10(7), 7.3(6), 8.18(7), 10.6, 10.15, 10.19(4), 11.12, 12.14, 14.23(4), 15.11, 16.13(2), 17.4(4), 17.8(2), 17.9(2), 17.10(2), 18.39, 18.40, 18.41, 18.42, 19.6(5), 19.8(2)</p>
<p>Assessment: As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EHS MS.</p> <p>It was confirmed through documentation and record review that both EBPC and the Operator have implemented record retention processes which include appropriate types of records to be retained, retention and disposition timeframes and disposal methods. Copies of all records requested were made readily available. The Operator maintains safety and incident data using its EPASS system with hard copy records being maintained in the regional offices.</p>
<p>Compliance Status: Compliant</p>
<p>4.4 Internal Audit Expectations: The company shall develop and implement a documented process to undertake audits of its management and protection programs and procedures. The audit process should identify and manage the training and competency requirements for staff carrying out the audits. These audits shall be conducted on a regular basis.</p>
<p>References: OPR-99 sections 53 and 55 CSA Z662-07 Clause 10.2.2 (c) and (h) (iii) COSHR 19.7 (1)(2)</p>
<p>Assessment: As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EHS MS.</p>

<p>During interviews, staff indicated that Operator's internal safety audits are conducted by the Operator's Manager, Internal Audits. The audit planning cycle is determined by a comprehensive risk assessment. The 28 September 2009 EHS MS audit commissioned by the Operator was reviewed along with the audit response report which shows the progression of remedial action to address non-compliances identified in the audit. Remedial action is tracked in the EPASS system to ensure actions items are closed-out. To ensure all legislated responsibilities are included, local subject matter experts are contracted to ensure appropriate legislation is included for the facilities being audited.</p> <p>It is recommended that the Operator choose an appropriate audit schedule and complete an internal audit of the safety of its operations and maintenance activities in the near future.</p>
<p>Compliance Status: Compliant with recommendation</p>
<p>5.0 MANAGEMENT REVIEW</p> <p>Expectations: Senior management should formally review the management and protection programs for continuing suitability, adequacy and effectiveness. The review should be based on appropriate documentation and records including the results of the surveillance, monitoring and audit programs. This review should be formal and documented and should occur on a regular basis. The management review should include a review of any decisions, actions and commitments which relate to the improvement of the programs and the company's overall performance.</p>
<p>References: OPR-99 section 55 CSA Z662-07 Clause 10.2.2 (h) (iii) COHSR sections 11.2(4), 12.10(1.2), 19.6(3), 19.7(1)-(2)</p>
<p>Assessment: See Appendix VII for the assessment of this element.</p>
<p>Compliance Status: See Appendix VII for the assessment of this element.</p>

APPENDIX III

EBPC ENVIRONMENTAL PROTECTION PROGRAM AUDIT EVALUATION TABLE

<p>1.0 POLICY AND COMMITMENT</p> <p>1.1 Policy and Commitment Statements</p> <p>Expectations: The company shall have a policy approved and endorsed by senior management (the Policy). It should include goals and objectives and commit to improving the performance of the company.</p>
<p>References:¹</p> <p>OPR-99 sections 4 and 48</p> <p>CSA Z662-07 Clause 10.2.2</p>
<p>Assessment:</p> <p>EBPC representatives indicated that Emera Inc., its parent company, has developed its own environmental management system which applies to all its companies. Further, EBPC identified that it had reviewed the Operator's policy to ensure consistency with its own. The Operator's Policy and Charter provides adequate direction and commitment to environmental protection.</p> <p>The policy was available at all workplaces and on the Operator's primary intranet site and interviews confirmed that employees understood the policy and its application in their work.</p>
<p>Compliance Status: Compliant</p>
<p>2.0 PLANNING</p> <p>2.1 Hazards Identification, Risk Assessment and Control²</p> <p>Expectations: The company shall be able to demonstrate a procedure to identify all possible hazards. The company should assess the degree of risk associated with these hazards. The company should be able to support the rationale for including or excluding possible risks in regard to its environment, safety, integrity, crossings and awareness and emergency management and protection programs (management and protection programs). The company should be able to implement control measures to minimize or eliminate the risk.</p>

¹ Each "Reference" in this table contains specific examples of the "legal requirements" applicable to each element but are not necessarily a complete list of all applicable legal requirements.

² Hazard: Source or situation with a potential for harm in terms of injury of ill health, damage to property, damage to workplace environment, or a combination of these. Risk: Combination of the likelihood and consequence(s) of a specified hazardous event occurring

References:

OPR-99 sections 4 (2) and 48
CSA Z662-07 Clause 10.2

Assessment:

As part of an Operations and Maintenance (O&M) Agreement between EBPC and its Operator, the Operator is implementing and maintaining the Environmental Protection program (EPP).

Interviews and document review indicated that the Operator is aware of the majority of the environmental hazards and aspects which could be associated with Brunswick Pipeline facilities. At the time of the audit, the Operator relied primarily on hazards identified for the project application and construction activities as opposed to an analysis of the hazard associated with or introduced by operations activities. The Operator also identified that it relies on its staff to proactively identify environmental hazards and aspects during pre-job analysis and contract development processes. A third source of hazard identification for operations were its measurement and monitoring activities (inspections and aerial patrols). Hazards identified through patrols were integrated into the Safety Evaluation Process and are applied to all environment, health and safety (EHS) processes.

The Operator's continued reliance on hazard information acquired during the application phase is an acceptable practice. Given the facilities are only a few years old, the present processes are adequate and use of information developed during the application and construction process is a prudent practice. However, the incorporation of the pre-existing and newly identified hazards should be more formally managed and documented. More specifically, confirmation of continued adequacy of data and methodologies should be done and formal links or requirements to application data should be incorporated into existing processes. If this integration of new and existing information is not done, the Operator risks not being in compliance in the future. In order to ensure and confirm the ongoing suitability of the processes, the construction processes should be reviewed, revised and formally adopted for the operation phase. During the audit, the Operator provided evidence that it was updating its EHS procedures. This update included a formalized Operations Controls Table which systematically reviewed the regulated activities and identified potential controls for each issue or hazard. This process, while not being complete or implemented at the time of the audit, was viewed as appropriate to meeting the majority of the Board's requirements for this element.

Therefore the Board recommends that the Operator ensure the complete the implementation of the Operations Control Table into the hazard identification processes to ensure environmental aspects for its operations and maintenance activities are appropriately addressed in procedures.

Compliance Status: Compliant with Recommendation

2.2 Legal Requirements

Expectations: The company shall have a verifiable process for the identification and integration of legal requirements into its management and protection programs. The company should have a documented procedure to identify and resolve non-compliances as they relate to legal requirements which includes updating the management and protection programs as required.

References:

OPR-99 sections 4, 6 and 48
CSA Z662-07 Clause 10.2.2 (g)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPP.

Interviews with EBPC staff indicated that, while its staff monitors general NEB requirements, it relies on the Operator to develop and implement a process to identify and manage compliance issues and facilities.

Interviews with the Operator's representatives indicated that it did not have a process for the formal and systematic identification of all of the applicable legislative and regulatory requirements which apply to the facilities. Lack of a demonstrated process does not necessarily identify lack of compliance; however, a formal process allows for a clear demonstration and assurance of compliance.

Interviews indicated that Operator staff are generally aware of legal requirements and apply them as required. Presently, the Operator's staff remains current with company expectations through involvement with industry organizations and legal subscriptions.

While the Operator was unable to provide appropriate legal lists as described above, staff indicated that, as part of the Operator's internal HSE audit processes, legal lists are developed for inclusion in the audit protocols applicable to individual audits and therefore act as a form of legal review. The Operator provided an example of a legal list developed for implementation of other NEB regulated facilities' audits. Examination of these documents indicated that they were not exhaustive of all required legislation and some applicable regulatory requirements were not included.

As further demonstration of its compliance, the company provided the NEB with additional information following the issuance of the draft audit report which asserted that the procedures and commitments contained within its construction and operations environmental protection plan (EPP) included the necessary environmental compliance requirements. Further, this information had been vetted through the NEB approval process as a measure of its compliance. The Board notes that, while the EBPC EPP was reviewed for compliance during the application process, as part of its environmental protection program requirements, the company must develop

and implement documented processes to actively monitor and integrate legal requirements on an on-going basis in order to ensure continued compliance.

Compliance Status: Non-compliant

2.3 Goals, Objectives and Targets

Expectations: The company should have goals, objectives and quantifiable targets relevant to the risks and hazards associated with the company's facilities and activities (i.e. construction, operations and maintenance). The objectives and targets should be measurable and consistent with the Policy and legal requirements and ideally include continual improvement and prevention initiatives, where appropriate.

References:

OPR-99 section 48

CSA Z662-07 Clause 10.2.2 (h) (ii)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPP. The Operator's EHS policy contains generalized goals and objectives for its EHS management system (EHS MS). The policy contained action plans and objectives set out by the Operator's Operations Committee, EHS Committee, as well as management and individual staff's personal safety action plans.

The membership of the Operations Committee and the EHS Committee consists of Vice Presidents of the various divisions. The committee provides reports and updates to the Operator's senior management for review. As part of the implementation of the EHS programs, EHS goals, targets and objectives have been identified for all staff and are included in individual job descriptions. Employees are measured and are recognized for meeting EHS performance objectives as part of the "Short Term Incentive Programs".

The Board identified that goals, objectives and targets, while managed appropriately, only marginally meet the present minimum requirements to be compliant and could be improved to address issues more relevant to EBPC operations and could better reflect measurable improvement of effectiveness of technical programs. It was noted that the goals focussed on broader regional issues such as improvements to compression related issues and issues more focussed on the North East (NE) United States (U.S.) facilities where the majority of the Operator's activities are. Presently there are no compression facilities in Canada; therefore, the goals do not fully reflect the Brunswick Pipeline facilities.

The goals, targets and objectives are considered only marginally compliant in that they exist but are so general that they do not accurately reflect the technical programs and were not considered to apply specifically to Brunswick Pipeline operations.

Therefore, the Board recommends that the Operator demonstrate an ongoing process for monitoring goals, targets and objectives relevant to its Canadian facilities and programs to promote continual improvement requirements.

Compliance Status: Compliant with recommendation

3.0 IMPLEMENTATION

3.1 Organizational Structure, Roles and Responsibilities

Expectations: The company shall have an organizational structure that allows its management and protection programs to effectively function. The company should have clear roles and responsibilities, which may include responsibilities for the development, implementation and management of the management and protection programs.

References:

OPR-99 section 48

CSA Z662-07 Clauses 10.2.1 and 10.2.2 (b)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPP. The Operator has established an EHS Management Team with specific accountability for the EPP. Copies of job descriptions were reviewed to confirm that specific EHS responsibilities and accountabilities had been included. The development of an appropriate structure and roles and responsibilities for field activities was also verified. By examining organization charts, it was identified that the lines of reporting for EHS issues are clearly outlined, and include reporting routes which includes the Vice President, Operations NE Transmission; Manager, NE-Health & Safety; EHS Support Specialist. Overall accountability for EHS issues is maintained by the Spectra EHS Committee (EHSC) which is comprised of senior EBPC personnel as well as representatives from the Operator's Board of Directors. The Operator was able to demonstrate through documentation that this committee is functioning as planned. Quarterly records of reviews conducted by this committee were reviewed as part of this audit.

It was noted that the organization and implementation of environmental procedures and practices at the field lies with the EHS Support Specialist with assistance of the regional Lands, Emergency Planning and Public Awareness Coordinators and the Operations Technicians. However, the audit was unable to verify that a formal, current job description existed for the EHS Support Specialist which included clearly articulated responsibilities and authorities. Based on staff interviews, it was clear that in practice the

responsibilities were well understood. As well, document review of field staff job descriptions indicated that environmental roles and responsibilities were not fully documented. Interviews with Operator regional staff confirmed that the structure in practice was appropriate and reporting relationships were clear. However, job descriptions should be formalized and the various needs including training, reporting structure, etc. be more formally managed.

After the document review and interviews, the audit also identified that the expectations of the EHS Support Specialist appeared to be significant for one person to manage and sustain. It was noted that the EHS management workload involved review and development of new practices and procedures and included oversight of activities involving contract management and on-sight activities.

The Operator did not demonstrate that it had formally identified and defined environmental responsibilities for the EHS Support Specialist and regional technical staff that have key roles in the implementation of the EPP. As well, it is recommended that the Operator review the resourcing of EHS oversight to ensure that environmental protection can be maintained.

Compliance Status: Non-compliant

3.2 Management of Change

Expectations: The company shall have a management of change program. The program should include:

- identification of changes that could affect the management and protection programs;
- documentation of the changes; and
- analysis of implications and effects of the changes, including introduction of new risks or hazards or legal requirements.

References:

OPR-99 section 6
CSA Z662-07 Clause 10.2.2 (g)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPP.

The Board noted that a Management of Change (MOC) process is in place which outlines the process to be followed for identifying, assessing and implementing changes once they have been approved by the responsible individuals (EHS MS Management of Change Performance Standard 2.7). The Board also noted that there is currently a collaborative process to review all Standard Operating Practices (SOPs) against all applicable regulatory requirements and best practices (Canadian and U.S.). The EHS group is leading this process with support of senior management, and regional subject matter experts.

Despite the existing efforts being put in place for MOC, it could not be verified that the Operator had a fully compliant and implemented MOC procedure for the EHS program that included proactive, formal identification of required changes and analysis of the effects that the changes may have on related processes. The audit identified that the present MOC process is only partially implemented by various corporate technical areas (e.g. Safety, Environment, Engineering and Construction). Review of the Operator's internal audit documentation for similar facilities identified issues with the implementation of the MOC and included plans for a corrective action.

The Operator could not demonstrate an adequate MOC was a fully implemented process for the Brunswick Pipeline facilities and activities.

Compliance Status: Non-compliant

3.3 Training, Competence and Evaluation

Expectations: The company shall have a documented training program for employees and contractors related to the company's management and protection programs. The company shall inform visitors to company maintenance sites of the practices and procedures to be followed. Training requirements should include information about program-specific policies. Training should include emergency preparedness and environmental response requirements as well as the potential consequences of not following the requirements. The company should determine the required levels of competency for employees and contractors. Training shall evaluate competency to ensure desired knowledge requirements have been met. Training programs should include record management procedures. The training program should include methods to ensure staff remains current in their required training. The program should include requirements and standards for addressing any identified non-compliances to the training requirement.

References:

OPR-99 sections 28, 29, 30 (b) 46, 48 and 56
CSA Z662-07 Clause 10.2.2 (c)

Assessment:

According to the O&M agreement between EBPC and the Operator, the Operator is responsible for training of employees with EPP roles and responsibilities.

The Operator maintains records of all training required and completed by all workers. A training matrix applies to employees assigned to operating and maintaining the EBPC pipeline including the environmental responsibilities. This matrix consists of a list of core training courses and the frequency with which they are required. Administrative procedures in place notify employees of any updates

to this matrix should additional training requirements be identified or should existing curricula be changed. Document review confirmed that the Human Resources Orientation checklist includes an EHS component and completion of the various components requires manager's sign off.

The Operator's environmental training matrix was reviewed and it was found to be primarily focused on frontline staff (Operations Technicians) and that it did not include refreshment requirements for senior staff with environmentally related roles. It was also noted that there were no training or competency requirements for the Operator's professional staff (EHS Support Specialist). This gap was considered significant as the majority of the environmentally related activities are coordinated or undertaken in this senior position.

This element was evaluated as non-compliant due to the need to develop and implement on-going training requirements for all staff with environmental responsibilities.

Compliance Status: Non-compliant

3.4 Communication

Expectations: The company should have an adequate, effective and documented communication process(es):

- to inform all persons associated with the company's facilities and activities (interested persons) of its management and protection programs policies, goals, objectives and commitments;
- to inform and consult with interested persons about issues associated with its operations;
- to address communication from external stakeholders;
- for communicating the legal and other related requirements pertaining to the management and protection programs to interested persons;
- to communicate the program's roles and responsibilities to interested persons.

References:

OPR-99 sections 18, 28, 29 and 48
CSA Z662-07 Clause 10.2.2 (d)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPP.

The Operator was able to demonstrate that it employs many methods for communicating environmental requirements with its internal and external stakeholders. Communication of EHS information takes place during safety stand down meetings; quarterly employee

meetings and safety updates; daily tailgate meetings; daily and weekly safety reports; NE Region Health and Safety Newsletters; monthly safety and communications meetings; monthly reports to EHS Corporate group; contract management activities, pre-job meetings, its intranet sites; etc.

The Operator could not demonstrate that it has an overarching communication plan that formally identifies and outlines the distribution of various types of information to appropriate parties. While interviews confirmed communication is occurring throughout technical networks and through the means identified above, without a formal communication plan, the Operator cannot ensure that all stakeholders and interested parties are receiving the appropriate information in a timely fashion.

The Board noted that Emera Inc.'s internal environmental management system requirements outlines requirements for this plan, which, if implemented as designed and in conjunction with the Operator's plan should result in a fully compliant communication plan. As the EPP communication plan was not implemented at the time of the audit, the Operator is found to be non-compliant.

Compliance Status: Non-Compliant

3.5 Documentation and Document Control

Expectations: The company should have documentation to describe the elements of its management and protection programs- where warranted. The documentation should be reviewed and revised at regular and planned intervals. Documents should be revised immediately where changes are required as a result of legal requirements or where failure to make immediate changes may result in negative consequences. The company should have procedures within its management and protection programs to control documentation and data as it relates to the risks identified in element 2.0.

References:

OPR-99 sections 27, 48 and 56
CSA Z662-07 Clause 10.2.2 (e) (f)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPP.

Document review confirmed that the Operator has implemented a comprehensive document management system which includes controlling and tracking all documents. As well, the audit identified evidence that the documents are to undergo continual reviews and improvement which should include on-going monitoring, evaluation and updating of documents when required.

Despite the existence of document management practices, the audit noted that the Operator is continuing to use the EPP developed during the application process for direction in undertaking operational environmental activities. Even though this pipeline is in operations this practice was viewed as appropriate at this time, given the length of time that this line has been operating and considering that the right-of- way (RoW) is still technically in a post-construction phase from an environmental perspective.

However, the Board recommends that the Operator develop and implement a process to regularly review, adopt and document those practices required for the operation and maintenance of the facilities to ensure that it continues to be fit-for-purpose and incorporates all legal requirements.

The Board notes that EBPC has filed additional information with respect to this issue as part of its comments on the NEB Draft Audit Report. In its comments EBPC indicated that its EPP will be revised only as submitted to the Board as per its undertaking during its application. The Board notes that it expects companies to maintain dynamic programs which identify, evaluate and control hazards on an ongoing basis. EBPC should therefore ensure that its programs are updated on a regular and appropriate basis to meet the Board's expectations regardless of its filings with the Board.

Compliance Status: Compliant with recommendation

3.6 Operational Control-Normal Operations

Expectations: The company should establish and maintain a process to develop, implement and communicate mitigative, preventive and protective measures to address the risks and hazards identified in elements 2.0 and 3.0. The process should include measures to reduce or eliminate risks and hazards at their source, where appropriate.

References:

OPR-99 sections 27-49
CSA Z662-07 Clauses 10.2.2 (f) and 10.3.1

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPP. Further, the Operator provided working documentation for the revision of EHS management processes and procedures which included a formal EHS Operations Control Table. The Operator uses this table to document and manage the issues which require the implementation of a control to minimize its effects.

<p>As noted in Element 2.1 and 2.2 above, the Operator has not demonstrated that it has compliant processes for identifying all of its legal requirements and environmental aspects and risks. As legal requirements and environmental risks are integral in normal operating conditions, the Operator could not demonstrate that they had identified all controls required to be developed to assure protection of the environment. As well, as noted in Documentation and Document Control (Element 3.5), the Operator was utilizing documents developed for construction activities as the primary procedures for the operation of the facilities.</p> <p>As the Operator was unable to provide an adequate hazard identification process and document control procedures, it could not demonstrate that its procedures were adequately addressing all hazards. The Operator was unable to demonstrate whether it was anticipating and controlling its environmental risks appropriately.</p>
<p>Compliance Status: Non-compliant</p>
<p>3.7 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 emergency events).</p>
<p>References: OPR-99 sections 32, 35 and 52 CSA Z662-07 Clauses 10.3.2 and 10.3.5</p>
<p>Assessment: From an environmental perspective, because of the product (sweet, dry gas) and the minimal above ground facilities, environmental impacts related to upsets would be limited to the effects of the failure of slopes at either upland or watercourse crossings, the effects of loss of integrity at water course crossings, the release of small volumes of operationally related wastes or Workplace Hazardous Materials Information System managed products, or an unintended release of product into the atmosphere. Control of these issues would consist of application of normal operating procedures and practices (see Element 3.6). No specific evaluation of this element was made as it relates to the EPP.</p>
<p>Compliance Status: N/A</p>
<p>4.0 CHECKING AND CORRECTIVE ACTION</p>

4.1 Inspection, Measurement and Monitoring

Expectations: The company shall develop and implement surveillance and monitoring programs. These programs should address contract work being performed on behalf of the company. These programs should include qualitative and quantitative measures for evaluating the management and protection programs and should, at a minimum, address legal requirements as well as the risks identified as significant in elements 2.0 and 3.0. The company should integrate the surveillance and monitoring results with other data in risk assessments and performance measures, including proactive trend analyses. The company shall have documentation and records of its surveillance and monitoring programs.

References:

OPR-99 sections 39, 48, 53 (1) and 54(1)

CSA Z662-07 Clauses 9.1.7, 10.2.2, 10.7.2.5, 10.7.2.6, 10.7.2.8 and 10.14.1

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPP.

Document review and interviews confirmed that the Operator has developed and implemented many activities for measuring and monitoring the implementation of the EHS MS. This monitoring is captured and communicated in the following ways:

- the development and review of daily and monthly progress reports;
- daily and weekly safety inspection reports (which includes environmental concerns);
- daily tool box meetings;
- weekly all staff meetings;
- weekly behavior based inspections;
- incident reporting and review;
- incident investigation where required;
- monthly RoW aerial patrols;
- annual full length RoW inspections (on-ground); and
- completion of incident reporting (including environmental issues).

As part of its post-construction activities, the Operator was able to demonstrate that it reviews and evaluates the environmental success of the mitigation program applied during the construction of its facilities.

Although the Operator has procedures for various duties, the Board noted that staff were performing additional undocumented

inspection activities as part of their everyday activities. For instance, staff identified that when performing routine maintenance they were required to evaluate the environmental condition of the worksite. This evaluation is not documented in the procedure nor is it clear how the results are captured. In another similar example, the technical staff identified that they perform a full on-ground inspection of the RoW annually which was also not fully documented or appropriately recorded. While the Board concluded that both inspection activities are good and necessary practices, they exist outside the procedure and therefore could be accidentally discontinued.

The Board recommends that the Operator ensure the thorough and formal documentation of activities that record environmental issues, requirements and inspection activities into its report requirements.

Compliance Status: Compliant with recommendation

4.2 Corrective and Preventive Actions

Expectations: The company shall have a process to investigate incidents or any non-compliance that may occur. The company shall have a process to mitigate any potential or actual issues arising from such incidents or non-compliances. Such mitigation may include appropriate timing and actions for addressing the issues that arise. The company shall demonstrate that it has established a documented procedure to:

- set criteria for non-compliance;
- identify the occurrence of any non-compliances;
- investigate the cause(s) of any non-compliances;
- develop corrective and/or preventative actions; and
- effectively implement the required corrective and/or preventative actions.

The company should develop procedures to analyze incident data in order to identify deficiencies and opportunities for improvement in its management and protection programs and procedures.

References:

OPR-99 sections 6 and 52

CSA Z662-07 Clause 10.2.2 (g) and (h)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPP.

The Operator was able to provide documents and records that demonstrated the development and implementation of appropriate

incident management and investigation processes. Further, the Operator was able to demonstrate that it has adequate processes in place to identify, develop and implement corrective and preventative actions which arise from its incident investigations.
Compliance Status: Compliant
4.3 Records Management Expectations: The company shall establish and implement procedures to ensure that the records supporting the management and protection programs are retained, accessible and maintained. The company shall, as a minimum, retain all records for the minimum lengths of time as required by the applicable legislation, regulation and standards incorporated by reference into the regulation.
References: OPR-99 sections 48 and 56 CSA Z662-07 Clause 10.2.2 (e)
Assessment: As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPP. Records related to the EPP are kept in the regional offices. It was confirmed through documentation and record review that the Operator has implemented record retention processes which include appropriate types of records to be retained, retention and disposition timeframes and disposal methods. Copies of all records requested were made readily available.
Compliance Status: Compliant
4.4 Internal Audit Expectations: The company shall develop and implement a documented process to undertake audits of its management and protection programs and procedures. The audit process should identify and manage the training and competency requirements for staff carrying out the audits. These audits shall be conducted on a regular basis.
References: OPR-99 sections 53 and 55 CSA Z662-07 Clause 10.2.2 (c) and (h) (iii)
Assessment: As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPP which

includes internal auditing of the various programs. As a result of the relative newness of the facilities a full audit applicable to its operations environmental programs had not been completed at the time of the audit.

In order to assess the intended audit practice and program, the Board evaluated the requirements of the Operators' audit process through the review of documents and records from internal audits conducted on the operator's other NEB regulated facilities. It was confirmed that the Operator has an internal audit program developed and implemented as directed by management. The Operator indicated that it develops its audit specific content based on identified regulatory requirements and management system principles. There is mandatory follow-up and close-out of findings that are reported by internal third parties with company senior management holding responsible managers and staff accountable.

The review of the program indicated that, the internal audit program was well documented and being appropriately implemented and managed. However, the program was not meeting the requirements of OPR-99 as it did not include an assessment of the adequacy of the EPP in meeting the requirements of Section 48 of OPR-99 nor was the Operator able to demonstrate a formal and comprehensive identification and evaluation of all of EBPC's regulatory requirements. Instead, the system relies on an informal, self identification of requirements by the facilities' operating staff and management which does not allow for a systematic review of the requirements and could lead to missing requirements to remain unidentified and unmeasured. Effectively, the audits completed presently are audits of conformance to the operator's existing practices as opposed to audits of compliance against all of the regulatory requirements which are applicable as outlined in OPR-99.

The Board therefore recommends that the Operator amend its internal audit program to ensure requirements identified in OPR-99 and other referenced and regulatory documents are appropriately defined and that internal audits incorporate all regulatory requirements that apply to the Brunswick Pipeline and facilities. Further, during the audit, EBPC staff provided documentation of its parent company's internal environmental management system which includes internal audit requirements. EBPC staff indicated that it was EBPC's intention to ensure that practices implemented reflect the Emera Inc. environmental management system requirements. If EBPC implements its contemplated practices it could result in an effective and fully compliant process.

Compliance Status: Compliant with recommendation

5.0 MANAGEMENT REVIEW

Expectations: Senior management should formally review the management and protection programs for continuing suitability, adequacy and effectiveness. The review should be based on appropriate documentation and records including the results of the surveillance, monitoring and audit programs. This review should be formal and documented and should occur on a regular basis. The management review should include a review of any decisions, actions and commitments which relate to the improvement of the

programs and the company's overall performance.
References: OPR-99 section 55 CSA Z662-07 Clause 10.2.2 (h) (iii)
Assessment: See Appendix VII for the assessment of this element.
Compliance Status: See Appendix VII for the assessment of this element.

APPENDIX IV
EBPC EMERGENCY PREPAREDNESS AND RESPONSE PROGRAM AUDIT EVALUATION TABLE

<p>1.0 POLICY AND COMMITMENT</p> <p>1.1 Policy and Commitment Statements</p> <p>Expectations: The company shall have a policy approved and endorsed by senior management (the Policy). It should include goals and objectives and commit to improving the performance of the company.</p>
<p>References:¹</p> <p>OPR sections 4, 47 and 48</p> <p>CSA Z662-07 Clause 10.2.2</p>
<p>Assessment:</p> <p>EBPC demonstrated that it has an emergency management (EM) policy in place that is endorsed by Management and communicated throughout the company. The EM policy is contained within a document titled: <i>Brunswick Pipeline, An Emera Company, Emergency Preparedness and Response (EPR) Program</i> updated May 2010.</p> <p>Interviews conducted with field technicians, District Manager and Lands and Public Awareness Coordinators (Coordinators) verified that staff are aware of the EM policy. They noted that the policy is reinforced in the procedures.</p> <p>Interviews with the Operator’s Area Manager and Coordinators verified that EBPC management supports the EPR Program. Monthly safety meetings allow all staff to raise issues and provide management with feedback. Feedback and action items are recorded at every meeting to ensure they are addressed and tracked. EBPC has provided the resources to support the EPR Program including the cost of conducting exercises and new equipment as required.</p> <p>Based on interviews and documents reviewed, the Board verified that EBPC has formally endorsed its EPR policy and communicated the policy at all levels of the organization.</p>
<p>Compliance Status: Compliant</p>
<p>2.0 PLANNING</p>

¹ Each “Reference” in this table contains specific examples of the “legal requirements” applicable to each element but are not necessarily a complete list of all applicable legal requirements.

2.1 Hazards Identification, Risk Assessment and Control²

Expectations: The company shall be able to demonstrate a procedure to identify all possible hazards. The company should assess the degree of risk associated with these hazards. The company should be able to support the rationale for including or excluding possible risks in regard to its environment, safety, integrity, crossings and awareness and emergency management and protection programs (management and protection programs). The company should be able to implement control measures to minimize or eliminate the risk.

References:

OPR-99 sections 4(2), 33, 37, 39, 40, 47, 48
CSA Z662-07 Clauses 10.2, 10.3.2

Assessment:

As part of an Operations and Maintenance (O&M) Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPR Program for the Brunswick Pipeline and associated facilities. On an annual basis, the Operator holds a meeting of the Area Manager, District Managers and Coordinators to discuss the Emergency Preparedness and Response Program with several standing agenda items including:

- the review of EPR risks
- review of the existing hazards including probability studies to determine the emergency planning zones for the pipeline
- planning EPR activities such as exercises
- a discussion of the appropriateness of the emergency planning zone (EPZ) calculations

The Board also reviewed the EPR related procedures and processes. The Operator's *EHS MS Performance Standard 2.0 EHS Risk Management* (Performance Standard) sets out the procedure for identifying hazards, assessing those hazards, determining levels of risk posed by the hazards and the controls needed to mitigate the risks. The current Performance Standard identifies a range of environment, health and safety hazards that could pose risks to people and environmental end points. The Performance Standard also includes the requirements for assessing the primary hazards posed by the Brunswick Pipeline system. An Operational Controls Table is used to maintain an inventory of the identified hazards, risk assessments, reference to legal requirements and established controls according to activity. For example, thermal radiation was identified as a hazard. In the design phase of the Brunswick Pipeline the company conducted probability studies based on risk of fatality and where those studies resulted in an emergency planning zone smaller than that used by Maritimes & Northeast Pipeline (M&NP) (which was based on thermal radiation studies), Brunswick Pipeline elected to adopt an emergency planning zone consistent with the M&NP similarly designed pipeline of same diameter and

² Hazard: Source or situation with a potential for harm in terms of injury of ill health, damage to property, damage to workplace environment, or a combination of these. Risk: Combination of the likelihood and consequence(s) of a specified hazardous event occurring

operating pressure. This EPZ formed the basis for design of the ERP to establish response procedures.

The Performance Standard should include all possible hazards to the public, responders, property and the environment. It should also include the level of risk posed by each hazard as well as the risk ranking and appropriate control measures for the purpose of emergency response planning. However, the Board could not verify that these procedures as implemented met the full intent of the Performance Standard or that the list of hazards was exhaustive for the Brunswick Pipeline facilities.

The Operator did not demonstrate that it has ensured the full implementation of its process for identifying all of the hazards and determining appropriate control measures for emergency response planning.

Compliance Status: Non-compliant

2.2 Legal Requirements

Expectations: The company shall have a verifiable process for the identification and integration of legal requirements into its management and protection programs. The company should have a documented procedure to identify and resolve non-compliances as they relate to legal requirements which includes updating the management and protection programs as required.

References:

OPR-99 sections 4, 6, 32, 40, 47 and 48
CSA Z662-07 Clause 10.2.2(g)

Assessment:

The EBPC Manager of Regulatory Affairs described the process that is in place to monitor regulatory changes related to the ERP for the Brunswick Pipeline. The requirements included in legislation, regulations, standards, advisories and other applicable regulatory information are tracked. Any changes or updates undergo strategic analysis to identify business impacts and required operational changes. Then, action plans are developed and implemented. All regulatory changes are captured and an annual summary of regulatory changes is broadly distributed throughout the Operator's organization. The EBPC Manager of Regulatory Affairs also tracks the conditions of certificate GC-110 and all commitments made by EBPC in the GH-1-2006 proceeding on an Excel spreadsheet.

The EPR Program includes a process to identify and integrate legal requirements from regulations and conditions of the certificate GC-110 into the program. The applicable sections of the OPR-99 related to EM are integrated into the EPR Program and the ERP. EBPC updates the ERP on an annual basis and files copies of the updates with the NEB in accordance with its document control procedures. The Board also confirmed that EBPC is in compliance with the conditions of certificate GC-110 that relate to EPR.

EBPC was able to demonstrate through interviews and documents reviewed that it has a process to identify and integrate legal requirements into its EPR Program.
Compliance Status: Compliant
2.3 Goals, Objectives and Targets Expectations: The company should have goals, objectives and quantifiable targets relevant to the risks and hazards associated with the company's facilities and activities (i.e. construction, operations and maintenance). The objectives and targets should be measurable and consistent with the Policy and legal requirements and ideally include continual improvement and prevention initiatives, where appropriate.
References: OPR sections 40, 47 and 48 CSA-Z662-07 Clause 10.2.2(h) (ii)
Assessment: As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPR Program. The Operator's <i>EHS MS Performance Standard EHS Objectives Targets and Strategies 7.1</i> sets out the goals, objectives and targets relevant to the risks and hazards associated with the EBPC facilities and activities. It was verified through the Environment and Safety Program assessments that the Operator was in compliance with this element as it relates to the ERP. Full descriptions of the related Safety and Environments programs are provided in Appendix II: EBPC Safety Program Audit Evaluation Table and Appendix III: EBPC Environmental Protection Program Audit Evaluation Table.
Compliance Status: Compliant
3.0 IMPLEMENTATION 3.1 Organizational Structure, Roles and Responsibilities Expectations: The company shall have an organizational structure that allows its management and protection programs to effectively function. The company should have clear roles and responsibilities, which may include responsibilities for the development, implementation and management of the management and protection programs.
References:

OPR-99 sections 40, 47 48
CSA Z662 Clauses 10.2.2(b), 10.3.2.4

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPR Program.

Various members of the Operator's operational personnel are assigned roles and responsibilities under the EPR Program. EPR roles are assigned to appropriate personnel and tested on an annual basis through full scale mock exercises as well as table top exercises. Interviews with the several technical staff verified that they understand their roles and responsibilities. Interviews and documentation reviewed determined that the Operator has established a suitable organizational structure for the purposes of, implementing and maintaining the EPR Program for the Brunswick Pipeline. The Operator demonstrated that it has the capacity to respond to an emergency based on the training received by personnel, the exercises conducted and the training of mutual aid partners.

The Operator was able to demonstrate that it has developed roles and responsibilities to ensure the effective implementation of its EPR Program.

Compliance Status: Compliant

3.2 Management of Change

Expectations: The company shall have a management of change program. The program should include:

- identification of changes that could affect the management and protection programs;
- documentation of the changes; and
- analysis of implications and effects of the changes, including introduction of new risks or hazards or legal requirements.

References:

OPR-99 section 6
CSA-Z662-07 Clause 10.2.2(g)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPR Program.

The Operator's *EHS MS Management of Change Performance Standard 2.7* sets out the expectations for the management of change (MOC) and how those changes will be incorporated into the necessary operational policies and standards. On an annual basis, EBPC and the Operator review and update the EPR Program to identify and assess any changes that may affect the EPR program. The analysis includes the results of emergency response exercises, continuing education and liaison programs, and changes to operating conditions of the pipelines.

At the time of the audit the Operator did not have a fully implemented MOC program to identify changes that could affect the EPR Program, including introduction of new risks, hazards or legal requirements and documenting these changes. The Board determined that the MOC process is only partially implemented as described in the standard by various technical areas including emergency management. For example, the Board could not verify that the annual review of the list of hazards was exhaustive for the Brunswick Pipeline facilities or that results of exercises were incorporated into the emergency management program, and therefore the identification of changes that could affect protection programs may not be complete. As such, the Board could not confirm the effectiveness of the MOC program. The Board noted that the Operator had identified this issue as part of its 2008 internal audit and has committed to corrective action.

Compliance Status: Non-compliant**3.3 Training, Competence and Evaluation**

Expectations: The company shall have a documented training program for employees and contractors related to the company's management and protection programs. The company shall inform visitors to company maintenance sites of the practices and procedures to be followed. Training requirements should include information about program-specific policies. Training should include emergency preparedness and environmental response requirements as well as the potential consequences of not following the requirements. The company should determine the required levels of competency for employees and contractors. Training shall evaluate competency to ensure desired knowledge requirements have been met. Training programs should include record management procedures. The training program should include methods to ensure staff remains current in their required training. The program should include requirements and standards for addressing any identified non-compliances to the training requirement.

References:

OPR-99 sections 28, 34, 35, 46 and 56
CSA Z662-07 Clauses 10.2.2 (c), 10.3.2.4

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPR Program including employee training. There are several elements of the employee training program. The Operator's *EHS Management System Performance Standard 1.4 EHS Training* outlines minimum training expectations and requirements for all operational employees as well as the frequency that the training is required to be considered current. In addition to EHS training requirements, the EPR Program for the Brunswick Pipeline includes additional training requirements for operations staff. The EPR training program includes at a minimum:

- attendance at related conferences and workshops,
- training in the Incident Command model for managing emergencies
- media relations, and
- crisis communication training

The training is complemented by:

- formal group and individual review of the emergency response plan and sign-off by the employee completing the review,
- tabletop or communications exercises,
- critique of the emergency response plans, and
- completion of any identified deficient training related to the use of response equipment.

Interviews verified that all personnel that have an emergency response role receive appropriate levels of training for the respective roles in accordance with the *EHS Management System Performance Standard 1.4 EHS Training* and the EPR Program. In addition, all field technicians and other personnel receive core safety training. While the field technicians are not provided specific emergency management training, they receive training in company emergency response procedures through participation in several emergency response exercises per year, including at least six table top exercises and one full scale mock emergency exercise. For cross-training purposes, personnel rotate through Incident Command roles such as incident commander, on-site supervisor, safety officer and liaison officer. In addition to participating in exercises, the Coordinators and District and Area Managers receive additional training in incident command and emergency operations centre management from the provincial Emergency Measures Organization (EMO). The competency of the responders is verified by written examination that is completed after training is received from the provincial EMO. Examination of training records for field technicians verified participation in emergency response exercises. The hard copy training records of all employees are filed and tracked by administrative staff and training requirements are managed by the Learning Management System (LMS) that tracks training completion and generates an e-mail to the employee and his or her manager when training is due. Field technicians noted that although there is not a field operator qualification procedure in place for Brunswick Pipeline, it will soon adopt the Field Operator Qualification Procedure that is under development by the Operator.

At each office or field location visited, the auditors were signed-in to the site, given a site orientation, and informed of the safety and emergency procedures to be followed in the event of an emergency.

Through the Operator's continuing education and liaison program, first responders such as fire departments, police and emergency health services, the New Brunswick and Nova Scotia EMOs, the public, pre-qualified contractors and other persons who may be involved in an emergency on the EBPC system are educated and receive training as required for their respective roles. Documents reviewed verified that the continuing education forums and emergency response exercises are very well attended by company personnel, first responders and others who may have a role, and that the forums and exercises are conducted several times per year according to a well planned and managed schedule. Due to the unique setting of the EBPC pipeline through the City of Saint John, the Operator has conducted extensive meetings and education programs with the City of Saint John fire department, police and Saint John EMO, which included conducting a full scale emergency exercise within the City of Saint John in 2009 with all response agencies involved.

The Operator was able to demonstrate that it provides and manages adequate emergency response training for employees.

Compliance Status: Compliant

3.4 Communication

Expectations: The company should have an adequate, effective and documented communication process(s):

- to inform all persons associated with the company's facilities and activities (interested persons) of its management and protection programs policies, goals, objectives and commitments;
- to inform and consult with interested persons about issues associated with its operations;
- to address communication from external stakeholders;
- for communicating the legal and other related requirements pertaining to the management and protection programs to interested persons;
- to communicate the program's roles and responsibilities to interested persons.

References:

OPR-99 sections 28, 29,33, 34, 35

CSA Z662Clauses 10.2.2(d), 10.3.2.2, 10.3.2.3

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPR Program. The Operator has a documented Continuing Education and Liaison Program in place to educate the public, first responders and contractors that may have a role in response to an emergency on the Brunswick Pipeline. Document review verified the content of information package that is provided to stakeholders, including information on pipeline safety, emergency preparedness, what to do if there is a suspected pipeline emergency and company contact information. Communication tools include hand delivery of information brochures to residents within the EPZs, annual information letters to all residents within the EPZs, first responder booklets, presentations to first responders, forestry operators, landowners and municipalities, video presentations, meetings, personal visits to landowners, and public awareness presentations. The Coordinator tracks the activities and schedules of events in binders.

Communications under the EBPC Public Relations and the Operator's awareness program address:

- EPZ residents
- Schools – including a natural gas education program
- Fire departments, police, EMOs and Emergency medical services
- Communities and interest groups
- Forestry operators
- Municipal, provincial and federal government
- Contractors

The Public Awareness Plan serves as a formal communication guide and to educate the public and others of the responsibilities of working safely near the pipeline. The target audiences include landowners, excavation contractors, forestry contractors and other identified parties who may live and work around the pipeline.

Accu-link call system is a 24-hour call system reached through the EBPC 1-800 number. The Accu-link centre will manage all calls received by EBPC for any reason. In the event of a phone call to report a potential pipeline emergency, the Accu-link centre records essential information on the nature of the emergency, caller contact information, location of the caller and location of the potential emergency. The call is immediately referred to the on-call duty officer and an electronic ticket is generated. The Accu-link system also receives calls related to line locate requests and work proposed on the EBPC right-of-way (RoW). For any work proposed within 500 metres of the EBPC RoW, the caller is referred to the Operator for review and approval of the work. The call system was tested as part of the audit during non-business hours which confirmed the system functions as described.

The Operator was able to demonstrate that it has communication processes to inform all persons associated with its facilities and activities of its EPR Program.

Compliance Status: Compliant

3.5 Documentation and Document Control

Expectations: The company should have documentation to describe the elements of its management and protection programs- where warranted. The documentation should be reviewed and revised at regular and planned intervals. Documents should be revised immediately where changes are required as a result of legal requirements or where failure to make immediate changes may result in negative consequences. The company should have procedures within its management and protection programs to control documentation and data as it relates to the risks identified in element 2.0.

References:

OPR-99 sections 27 and 32

CSA Z662-07 Clause 10.2.2(e), (f), 10.3.1.1(d)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPR Program.

The Operator has developed a documented EPR Program that describes the elements of its EM Program. The EPR Program includes elements such as: risk assessment, liaison program, continuing education program, emergency preparedness manuals, training, validation, document control, policy, goals and program review. The EPR Program is reviewed and revised as necessary during the annual management review process with EBPC Management.

The Brunswick Pipeline Field ERP sets out the company response procedures in the event of a pipeline emergency on the Brunswick Pipeline in New Brunswick. The document is current to January 2010 and, in accordance with the EPR Program, it undergoes management review on an annual basis. Review of the minutes of the annual meeting demonstrates that the ERP is a standing agenda item for the annual review and has undergone minor revisions in the most recent review. The ERP contains the appropriate sections and content to enable the Operator to deal with an emergency, including but not limited to: levels of alert, response team structure, mutual aid, command posts, initial action and notification, flowcharts, role descriptions, responder safety, EPZ isolation, public safety, ignition guidelines, government roles, post incident procedures, maps, forms, training and exercises, etc. Interviews and site visits confirmed that the ERP is contained in all field vehicles and offices and is tested through the training program and exercise program. It is a living document that is controlled and used regularly for exercises and training.

The Operator has implemented a document control procedures that includes the ERP and emergency response mapping are also controlled and distributed to appropriate agencies and First Responders that may have a role in an emergency. Urban and rural fire departments have copies of the emergency response mapping for their respective regions and receive updates as required through the document control process. The provincial fire marshals and the Saint John Fire Department hold controlled copies of the Emera emergency procedures manual.

Under certificate GC-110 conditions 18 and 19, EBPC is required to file the ERP with the Board at least 60 days prior to operation of the pipeline and to consult with stakeholders in the development of the ERP. The ERP and evidence of consultation was filed with the Board within the required time frames. EBPC and the Operator conducted considerable consultation with the communities, the City of Saint John, the Fire Department, Police, EHS and City of Saint John EMO in order to develop the best possible emergency response plan that meets the needs of the stakeholders and addresses public safety, responder safety and protection of property and the environment.

Compliance Status: Compliant

3.6 Operational Control-Normal Operations

Expectations: The company should establish and maintain a process to develop, implement and communicate mitigative, preventive and protective measures to address the risks and hazards identified in elements 2.0 and 3.0. The process should include measures to reduce or eliminate risks and hazards at their source, where appropriate.

References:

OPR-99 sections 27-49
CSA Z662-07 Clauses 10.2.2(f), 10.3.1

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPR Program.

The Operator's EPR Program establishes and maintains the processes to develop, implement and communicate mitigative, preventive and protective measures to address the risks and hazards posed by the Brunswick Pipeline. Through its continuing education, liaison and public awareness programs EBPC has established processes to communicate the mitigative, preventive and protective measures.

Compliance Status: Compliant

3.7 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 emergency events).

References:

OPR-99 sections 32, 35 and 52
CSA Z662-07 Clause 10.3.2

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPR Program.

The Operator has an ERP in place for the operation of the Brunswick Pipeline. The ERP is updated annually, and is a controlled document. The ERP and any updates are filed with NEB as required. Based on the hazards identified, the ERP includes appropriate roles, equipment, procedures, etc. The ERP also contains a description for the training of company personnel, first responders and contractors are tested on a scheduled basis through full scale mock and table top exercises. EBPC along with the Operator regularly consults and informs the public, agencies and first responders (fire departments, police and EHS) about the locations of its pipelines and facilities, the hazards associated with its pipeline system, the procedures to follow in the event of an emergency, and the names and contact numbers of the company in order to report any suspected or actual pipeline emergency.

The Operator has a documented incident reporting procedure and conducts debrief sessions upon completion of exercises in order to review and learn, and revise the EPR Program as required.

Compliance Status: Compliant

4.0 CHECKING AND CORRECTIVE ACTION

4.1 Inspection, Measurement and Monitoring

Expectations: The company shall develop and implement surveillance and monitoring programs. These programs should address contract work being performed on behalf of the company. These programs should include qualitative and quantitative measures for evaluating the management and protection programs and should, at a minimum, address legal requirements as well as the risks identified as significant in elements 2.0 and 3.0. The company should integrate the surveillance and monitoring results with other data in risk assessments and performance measures, including proactive trend analyses. The company shall have documentation and records of its surveillance and monitoring programs.

<p>References: OPR-99 sections 36, 39, 47, 48, and 53(1) CSA Z662-07 Clauses 10.2.2, 10.3.2.4, 10.14.1</p>
<p>Assessment: Surveillance and monitoring processes and procedures are documented under the Public Awareness and Crossings Programs. Please refer to Appendix V: EBPC Crossings Program Audit Evaluation Table and Appendix VI: EBPC Public Awareness Program Audit Evaluation Table for details on EBPC's inspection, measurement and monitoring programs as it relates to EPR.</p>
<p>Compliance Status: N/A</p>
<p>4.2 Corrective and Preventive Actions Expectations: The company shall have a process to investigate incidents or any non-compliance that may occur. The company shall have a process to mitigate any potential or actual issues arising from such incidents or non-compliances. Such mitigation may include appropriate timing and actions for addressing the issues that arise. The company shall demonstrate that it has established a documented procedure to:</p> <ul style="list-style-type: none"> • set criteria for non-compliance; • identify the occurrence of any non-compliances; • investigate the cause(s) of any non-compliances; • develop corrective and/or preventative actions; and • effectively implement the required corrective and/or preventative actions. <p>The company should develop procedures to analyze incident data in order to identify deficiencies and opportunities for improvement in its management and protection programs and procedures.</p>
<p>References: OPR-99 sections 6 and 52 CSA Z662-07 Clauses 10.2.2(g) and (h)</p>

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPR Program. The Operator has documented standard guidelines for incident reporting as required by OPR-99 section 52 and for incident investigation. The incident reporting process is set out in the Brunswick Pipeline ERP and addresses the requirements of OPR-99 section 52. The ERP also includes a post incident evaluation and overview of the post incident report. The Operator's *EHS MS Incident Learning and Prevention Performance Standard 8.1* sets out the incident investigation procedures.

Within its first year of operation, the Operator conducted a full scale mock exercise to test several elements of the Brunswick Pipeline EPR Program. The exercise was planned and conducted to meet the requirements of the GH-1-2006 certificate condition 21. The exercise met the requirements of condition 21 and there is documentation that supports the planning and implementation phases of the exercise, the feedback received from participants and the actions put in place in response to participant feedback.

In meeting condition 21, EBPC filed its summary with the Board that included a description of how it responded to the feedback from participants. However, the Board could not confirm that the process for incorporating lessons learned into the ERP had been implemented. There was no documentation showing that the feedback received from participants, the lessons learned from the exercise and the actions put in place to address suggested improvements were integrated into the EPR Program. There is no documentation demonstrating that completion of the actions is tracked and verified.

The Operator did not demonstrate the implementation of a process for tracking, assigning actions and verifying completion of actions from the lessons learned in its table top and full scale emergency response exercises.

Compliance Status: Non-complaint**4.3 Records Management**

Expectations: The company shall establish and implement procedures to ensure that the records supporting the management and protection programs are retained, accessible and maintained. The company shall, as a minimum, retain all records for the minimum lengths of time as required by the applicable legislation, regulation and standards incorporated by reference into the regulation.

References:

OPR-99 sections 32, 47, 48, 52, and 56
CSA Z662-07 Clauses 10.2.2(e)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPR Program.

It was verified that training records, monthly inspection reports, budgets, compliance reports, manuals and other documents are managed and tracked through programs such as System and Integrity Logging, the LMS and the Operator's web portal.

Records of landowner contact information are part of the EPR program. The Operator maintains landowner contact information in a database. Inputs to the landowner database include information received in response to the annual letter to all landowners along the Brunswick Pipeline, GIS data, provincial EMO data, City of Saint John data and title searches as required. As the landowner database is incorporated into the Brunswick Pipeline Emergency Response Mapping, there is potential for changes in land use and ownership to affect the ERP. For that reason, the landowner database is reviewed annually.

The Operator was able to demonstrate that it manages and maintains operational records related to the EPR.

Compliance Status: Compliant**4.4 Internal Audit**

Expectations: The company shall develop and implement a documented process to undertake audits of its management and protection programs and procedures. The audit process should identify and manage the training and competency requirements for staff carrying out the audits. These audits shall be conducted on a regular basis.

References:

OPR-99 sections 53 and 55

CSA Z662-07 Clause 10.2.2 (c) and (h)(iii)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the EPR Program.

The Operator's *EHS Management System Performance Standard 9.1 EHS Audits* documents the internal audit program. The performance standard sets out a 3 year cycle for all operational internal audits. The EBPC Manager of Regulatory Affairs indicated that due to the short time frame that the Brunswick Pipeline has been in operation (less than one year prior to the NEB audit); it had not yet conducted an internal audit of its programs.

The Board recommends that the Operator amend its internal audit program to ensure requirements identified in OPR-99 and other referenced and regulatory documents are appropriately defined (see also Element 2.2 Legal Requirements) and that internal audits incorporate all regulatory requirements that apply to the Brunswick Pipeline and facilities. Further, during the audit, EBPC staff provided documentation of its parent company's internal environmental management system which includes internal audit requirements. EBPC staff indicated that it was EBPC's intention to ensure that practices implemented reflect the Emera Inc. environmental management system requirements. If the audit process is implemented as proposed, it could result in an effective and fully compliant process.

Compliance Status: Compliant with Recommendation

5.0 MANAGEMENT REVIEW

Expectations: Senior management should formally review the management and protection programs for continuing suitability, adequacy and effectiveness. The review should be based on appropriate documentation and records including the results of the surveillance, monitoring and audit programs. This review should be formal and documented and should occur on a regular basis. The management review should include a review of any decisions, actions and commitments which relate to the improvement of the programs and the company's overall performance.

References:

OPR-99 section 55

CSA Z662-07 Clause 10.2.2(h)(iii)

Assessment:

See Appendix VII for the assessment of this element.

Compliance Status: See Appendix VII for the assessment of this element.

APPENDIX V: EBPC CROSSING PROGRAM AUDIT EVALUATION TABLE

<p>1.0 POLICY AND COMMITMENT</p> <p>1.1 Policy and Commitment Statements</p> <p>Expectations: The company shall have a policy approved and endorsed by senior management (the Policy). It should include goals and objectives and commit to improving the performance of the company.</p>
<p>References:¹</p> <p>OPR-99 sections 4, 47 and 48</p> <p>CSA Z662-07 Clause 10.2.2</p>
<p>Assessment:</p> <p>EBPC filed its Operations and Maintenance (O&M) Manual, developed by the Operator, as the guidance document for the operation phase of the Brunswick Pipeline and has endorsed the policies and procedures contained therein. According to the O&M Manual, activities related to crossings are included in the overall integrity and pipeline maintenance programs and therefore subsumed in the overall Safety Program. The policy in the manual reads, “<i>Environmental protection, health and safety are considered to be both corporate and personal responsibilities for EBPC and its employees.</i>” (O&M Specifications Manual p.1)</p> <p>Based on interviews and documents reviewed, the Board verified that EBPC has adopted the Operator’s Environment Health and Safety (EHS) Management System (MS) and that the commitment to managing its safety hazards and risks was visible at all levels within the organization.</p>
<p>Compliance Status: Compliant</p>
<p>2.0 PLANNING</p> <p>2.1 Hazards Identification, Risk Assessment and Control²</p> <p>Expectations: The company shall be able to demonstrate a procedure to identify all possible hazards. The company should assess the degree of risk associated with these hazards. The company should be able to support the rationale for including or excluding possible risks in regard to its environment, safety, integrity, crossings and awareness and emergency management and protection programs (management and protection programs). The company should be able to implement control measures to minimize or eliminate the risk.</p>

¹ Each “Reference” in this table contains specific examples of the “legal requirements” applicable to each element but are not necessarily a complete list of all applicable legal requirements.

² Hazard: Source or situation with a potential for harm in terms of injury of ill health, damage to property, damage to workplace environment, or a combination of these. Risk: Combination of the likelihood and consequence(s) of a specified hazardous event occurring

<p>References: OPR-99 sections 4(2), 37, 39, 40, 41 CSA-Z662-07 Clause 10.2, 10.14</p>
<p>Assessment: As part of an O&M Agreement between EBPC and its Operator, all third party crossings activities outlined in the <i>National Energy Board Pipeline Crossing Regulations</i> (PCR) are managed and executed by the Operator.</p> <p>The main risk identified for crossing activities is third party damage. To mitigate the risks associated with third parties conducting work near the pipeline, staff indicated that there are hot zone procedures included in the Operations and Maintenance Manual. As part of the procedure, the Lands, Public Awareness and Emergency Management Coordinator (Coordinator) conducts pre-job and project kick-off meetings to ensure that staff and contractors involved in the project are aware of the hazards of working around a hot line. Field staff also attend the project tailgate meetings. Any time there is a third party working within 5 metres of the pipe; procedures dictate that there is a pipeline company representative onsite to supervise the work to ensure that safety instructions are followed. Field staff also indicated a high level of confidence in their ability to alert management to safety issues related to third party crossings. Documents reviewed onsite show that hazards related to crossing projects are reviewed in pre-job safety meetings and noted in the pre-job checklist to capture safety requirements for each job.</p> <p>The Operator demonstrated that it has processes in place to identify, report and address hazards introduced by third parties working around pipelines.</p>
<p>Compliance Status: Compliant</p>
<p>2.2 Legal Requirements Expectations: The company shall have a verifiable process for the identification and integration of legal requirements into its management and protection programs. The company should have a documented procedure to identify and resolve non-compliances as they relate to legal requirements which includes updating the management and protection programs as required.</p>
<p>References: OPR-99 sections 4 and 6 PCR Part II sections 4 and 5 CSA Z662-07 Clause 10.2.2(g)</p>
<p>Assessment: As part of an O&M Agreement between EBPC and its Operator, legal requirements outlined in the PCR are managed and executed by the Operator.</p>

During interviews, EBPC stated that the Director of Regulatory Affairs and Government Relations is the primary point of contact with the NEB with regard to any compliance issues or changes to regulatory requirements. Upon receiving notification/correspondence from the NEB, the Director, Regulatory Affairs and Government Relations forwards this information to the Operator as appropriate.

The Operator did not demonstrate that it has a formal process for the tracking and ensuring implementation of legal requirements into the procedures for the operations and maintenance of the pipeline.

Although regulatory requirements were reflected in the procedural documents, the audit identified one issue of particular note to the Board. The Operator had failed to recognize the requirement to file its technical crossing guidelines for Board approval as required by the PCR. The Board notes that subsequent to the onsite portion of this audit, EBPC has filed its guidelines.

The Operator could not demonstrate that it has a formal process to identify and integrate PCR requirements into its pipeline crossings program.

Compliance Status: Non-compliant

2.3 Goals, Objectives and Targets

Expectations: The company should have goals, objectives and quantifiable targets relevant to the risks and hazards associated with the company's facilities and activities (i.e. construction, operations and maintenance). The objectives and targets should be measurable and consistent with the Policy and legal requirements and ideally include continual improvement and prevention initiatives, where appropriate.

References:

OPR-99 sections 47 and 48
CSA-Z662-07 Clause 10.2.2(h) (ii)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, all third party crossings activities outlined in the PCR are managed and executed by the Operator.

Employee objectives are discussed with their supervisor at the beginning of the year, at least once during the year and again at the end of the year when the past year's performance is evaluated and objectives are established for the next year. Safety goals, targets and objectives have been identified for all staff and are included in individual job descriptions. Safety performance is included in the overall employee objectives and employees are provided recognition in meeting its EHS performance objectives known as the "Short Term Incentive Programs".

<p>The Board verified during interviews with staff and document review that the Operator manages third party activities as part of the overall operational program and is represented in the safety goals.</p>
<p>Compliance Status: Compliant</p>
<p>3.0 IMPLEMENTATION</p> <p>3.1 Organizational Structure, Roles and Responsibilities</p> <p>Expectations: The company shall have an organizational structure that allows its management and protection programs to effectively function. The company should have clear roles and responsibilities, which may include responsibilities for the development, implementation and management of the management and protection programs.</p>
<p>References: OPR-99 sections 40, 47 and 48 CSA-Z662-07 Clauses 10.2.1 and 10.2.2 (b)</p>
<p>Assessment: As part of an O&M Agreement between EBPC and its Operator, all third party crossings activities outlined in the PCR are managed and executed by the Operator.</p> <p>The Coordinator is accountable for senior level crossing activities. This position reports to the Right-of-Way (RoW) Manager of the northeast region in Head Office (Waltham, MA). The Coordinator manages and monitors all third party activities around the Brunswick Pipeline including onsite supervision of third party crossings and post crossing inspections. The Coordinator also manages complex crossing files with the assistance and oversight from engineering staff in Halifax, NS or Waltham, MA. There are also three technical staff positions that were hired to work exclusively on the Brunswick Pipeline. Although the Coordinator does some coaching of these new staff, they receive assignments and report directly to the Operator's Area Supervisor in New Brunswick. Interviews confirmed that staff understood their roles and to whom they were to report.</p> <p>The Operator was able to demonstrate that the current structure allows for the crossing program to function effectively.</p>
<p>Compliance Status: Compliant</p>
<p>3.2 Management of Change</p> <p>Expectations: The company shall have a management of change program. The program should include:</p> <ul style="list-style-type: none"> • identification of changes that could affect the management and protection programs; • documentation of the changes; and • analysis of implications and effects of the changes, including introduction of new risks or hazards or legal requirements.

References:

OPR-99 section 6
CSA-Z662-07 Clause 10.2.2 (g)

Assessment:

As part of the O&M agreement, EBPC has delegated the operational and technical responsibilities to the Operator. The Operator has implemented some elements of a change management program for the operational procedures including third party related activities as part of the Integrity Management Program. Changes to current procedures are addressed through a change request process. Once updated, the administrator posts the most current version on the intranet with all of the other manuals for each discipline for access and these changes are discussed at safety meetings.

However, at the time of the audit, the Operator could not demonstrate that it had a fully developed and implemented Management of Change Program that would identify changes that could affect the management of third party activities, including introduction of new risks, hazards or legal requirements and documenting these changes.

Compliance Status: Non-compliant**3.3 Training, Competence and Evaluation**

Expectations: The company shall have a documented training program for employees and contractors related to the company's management and protection programs. The company shall inform visitors to company maintenance sites of the practices and procedures to be followed. Training requirements should include information about program-specific policies. Training should include emergency preparedness and environmental response requirements as well as the potential consequences of not following the requirements. The company should determine the required levels of competency for employees and contractors. Training shall evaluate competency to ensure desired knowledge requirements have been met. Training programs should include record management procedures. The training program should include methods to ensure staff remains current in their required training. The program should include requirements and standards for addressing any identified non-compliances to the training requirement.

References:

OPR-99 sections 28, 29, 30 (b), 46, 47, 48 and 56
CSA Z662-07 Clause 10.2.2(c)

Assessment:

According to the O&M agreement between EBPC and the Operator, the Operator is responsible for training of employees. The Operator manages electronic training records in the Houston, Texas office with a Learning Management System. Document review onsite confirmed that hard copies of training records and certifications are managed by administrative staff in the Saint John office. Training updates and renewal notices are sent to employees through the system.

When new technical staff were hired to address the operational requirements of the Brunswick Pipeline, the Operator Area Supervisor identified technical courses that the new technicians required to perform their duties. The Operator created and evaluated the list of courses to confirm the list corresponded with the duties the technicians would be performing. Interviews confirmed that employees also learn by shadowing the Coordinator while conducting third party related activities, such as safety presentations and project kick-offs.

The Operator was unable to demonstrate that training requirements for the Coordinator roles had been formally included in its training program. This position performs tasks requiring high degrees of technical knowledge and training has been provided on an ongoing basis. However, senior staff indicated that there are no skill inventories maintained for these senior technical positions.

Although the Operator demonstrated the existence of a training program for new employees, senior staff were not included in the Training matrix. The Board recommends that the Operator formally identify and incorporate the training needs of Coordinators into its existing Training Program to ensure knowledge and experience of current Coordinators is captured and incorporated into future training needs.

Compliance Status: Compliant with recommendation**3.4 Communication**

Expectations: The company should have an adequate, effective and documented communication process(es):

- to inform all persons associated with the company's facilities and activities (interested persons) of its management and protection programs policies, goals, objectives and commitments;
- to inform and consult with interested persons about issues associated with its operations;
- to address communication from external stakeholders;
- for communicating the legal and other related requirements pertaining to the management and protection programs to interested persons;
- to communicate the program's roles and responsibilities to interested persons.

References:

OPR-99 sections 18, 28 and 29
CSA Z662-07 Clause 10.2. 2 (d)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, all third party crossings activities outlined in the PCR are managed and executed by the Operator.

For the Operator, internal communication is done through regular face to face meetings as well as frequent phone conversations with field staff responsible for crossings activities that cover large geographical areas. To facilitate communication with employees in the field, each company truck is equipped with communication equipment such as satellite phones to ensure that staff are able to remain in contact at all times. The Brunswick Pipeline website is used to communicate with external stakeholders regarding living and working safely around its pipeline. The EBPC site contains accurate information regarding the process for contacting the company, the circumstances under which it is required to do so, as well as the process for obtaining permission to work around its pipeline.

Although there are several informal internal communication mechanisms in place, the Operator could not demonstrate that there is a formalized and implemented communication overarching plan that outlines the distribution of various types of information to appropriate parties. While interviews confirmed communication is occurring throughout technical networks, without a formal communication plan, the Operator cannot ensure that all stakeholders and interested parties are receiving the appropriate information in a timely fashion. For example, the Area Supervisor does not receive any reports regarding the Coordinator's crossing related workload which makes trending and resource forecasting difficult.

Despite documented communication which takes place during the various meetings, the Board recommends that information related to third party activities be included in a formalized safety related communication plan.

Compliance Status: Compliant with recommendation

3.5 Documentation and Document Control

Expectations: The company should have documentation to describe the elements of its management and protection programs- where warranted. The documentation should be reviewed and revised at regular and planned intervals. Documents should be revised immediately where changes are required as a result of legal requirements or where failure to make immediate changes may result in negative consequences. The company should have procedures within its management and protection programs to control documentation and data as it relates to the risks identified in element 2.0.

References:

OPR-99 section 27
CSA-Z662 Clause 10.2.2 (e)(f)
PCR Part II sections 10 and 11

Assessment:

As part of an O&M Agreement between EBPC and its Operator, all third party crossings activities outlined in the PCR are managed and executed by the Operator.

The Operator's administrative staff manage the majority of the crossing related procedural information in the Fredericton office. Document revision logs confirm that the procedures are periodically reviewed and updated and that revisions are approved. For procedures, there is a document revision list to manage all the changes to any of the procedures. Technical staff complete a request for revision form to track and record all requests and subsequent changes to procedures. The revision date is on the front of the procedure. Once approved and revised, the procedures are posted on the intranet by the administrative staff in each office and the outdated versions are removed. The Operator's staff also control and document the distribution of its as-built plans as part of the crossing application file.

The Operator was able to demonstrate that there is a process in place to review and control the versioning of procedures related to third party activities.

Compliance Status: Compliant**3.6 Operational Control-Normal Operations**

Expectations: The company should establish and maintain a process to develop, implement and communicate mitigative, preventive and protective measures to address the risks and hazards identified in elements 2.0 and 3.0. The process should include measures to reduce or eliminate risks and hazards at their source, where appropriate.

References:

OPR-99 sections 27-49

CSA Z662-07 Clauses 10.2.2 (f) & 10.3.1

PCR Part II sections 4 and 5

Assessment:

As part of an O&M Agreement between EBPC and its Operator, all third party crossings activities outlined in the PCR are managed and executed by the Operator. EBPC receives updates on the operation of the pipeline during weekly conference calls with the Operator. Third party related agenda items are discussed under maintenance issues.

The Brunswick Pipeline RoW crosses both urban and rural settings, so there are several types of crossing projects that take place nearby. Those parties who propose an activity that meets the legal and company criteria for requiring permission to cross, normally do so by contacting the company directly. Crossing requests made through the 1-888 number, are initially received by the administrative staff and then technical staff evaluate them for what level of follow-up is required. In New Brunswick, some requests to cross come

through the Saint John Digline (one-call centre). Digline forwards all requests for locates within 500 metres as well as a daily report of all requests that were given the “all clear” because they were beyond 500 metres. Requests between 200-500 metres are cleared at the office and those under 200 metres are reviewed by field technicians. The technicians do locates for any request between 5 and 10 metres from the RoW and they are present for any excavation activity within 5 metres. Within 3 metres, the Coordinator typically observes the crossing.

Normal operations for crossings-related duties are described in the O&M Manual. In cooperation with the senior staff such as the Area Manager, the Coordinator and technical staff indicate a high level of involvement in the maintenance and enhancement of the procedures. The technicians are cross-trained to perform many of the front line duties for crossings including:

- Conducting pre-job meetings;
- Attending all crossing installations on the RoW and within 5 metres and complete the pipeline inspection reports;
- Post crossing inspections
- Performing visual analysis to identify anomalies in the coating such as corrosion which would be referred to the Waltham, MA office for review; and
- Meeting with third parties.

Technical staff are also responsible for performing locates as required. Crossing requests made through the 1-888 number, the administrative staff introduces the request into the process and the technicians receive the locate requests and perform the locates accordingly. The Coordinator addresses the more complex crossing requests with support from the engineers in the Halifax, NS or Waltham, MA offices.

The Operator has adequately documented procedures and processes that address processes and roles for normal operating conditions.

Compliance Status: Compliant

3.7 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 emergency events).

References:

OPR-99 sections 32, 52
CSA-Z662-07 Sections 10.3.2 and 10.14

Assessment:

As part of an Operations and Maintenance (O&M) Agreement between EBPC and its Operator, all third party crossings activities outlined in the PCR are managed and executed by the Operator.

Upset conditions for third party related activities would trigger the Emergency Response Plan. The Operator has conducted table tops that tested the third party damage scenario for training purposes. For more information relating to the assessment of the Operator's Emergency Preparedness and Response Program refer to Appendix IV of this report.

Compliance Status: N/A

4.0 CHECKING AND CORRECTIVE ACTION**4.1 Inspection, Measurement and Monitoring**

Expectations: The company shall develop and implement surveillance and monitoring programs. These programs should address contract work being performed on behalf of the company. These programs should include qualitative and quantitative measures for evaluating the management and protection programs and should, at a minimum, address legal requirements as well as the risks identified as significant in elements 2.0 and 3.0. The company should integrate the surveillance and monitoring results with other data in risk assessments and performance measures, including proactive trend analyses. The company shall have documentation and records of its surveillance and monitoring programs.

References:

OPR 99 sections 36 and 39

CSA-Z662-07 Clauses 9 and 10

PCR Part II sections 4, 5, 10 and 14(1)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, all third party crossings activities outlined in the PCR are managed and executed by the Operator. EBPC receives updates on the RoW patrols during the weekly conference calls.

At the time of the audit, the Operator technicians for the Brunswick Pipeline patrolled the crossing points of the urban RoW daily. The Operator technical staff drives the urban sections of the Brunswick Pipeline are driven by technical staff in order to identify possible issues with unauthorized activity or encroachment. Interviews confirmed that technical staff were aware of how to identify and report any issues along the RoW and patrol reports were reviewed. RoW patrol reports are maintained in the System and Integrity Logging database (SAIL).

The entire RoW is flown once a week by a fixed wing plane. Board auditors interviewed the pilot to confirm that the Operator provided procedures for identification and reporting of hazards such as excavation equipment on or near the RoW. Air patrol was

aware of and follows the Operator's procedure for documenting patrols and reporting any issues to the regional office. The records of the aerial inspections are reviewed and filed in the regional office. The Board was able to view procedures and records for training of aerial patrol staff which ensures consistency as there is turnover in this position.

However, it is noted that a draft Standard Operating Procedure (SOP) detailing the procedure to be followed when encroachments are installed on the RoW, did not adequately address PCR, Part I section 4 (b) which requires all encroachments installed on the RoW be given written permission, even if they are subsequently removed. In addition, in order to ensure compliance with the PCR, Part II section 15, the SOP needs to require that all facilities permitted on the RoW be inspected to ensure any deterioration has been detected.

The Operator did not demonstrate that it had PCR compliant procedures in place to monitor the ongoing condition of encroachments on the right of way.

Compliance Status: Non Compliant

4.2 Corrective and Preventive Actions

Expectations: The company shall have a process to investigate incidents or any non-compliance that may occur. The company shall have a process to mitigate any potential or actual issues arising from such incidents or non-compliances. Such mitigation may include appropriate timing and actions for addressing the issues that arise. The company shall demonstrate that it has established a documented procedure to:

- set criteria for non-compliance;
- identify the occurrence of any non-compliances;
- investigate the cause(s) of any non-compliances;
- develop corrective and/or preventative actions; and
- effectively implement the required corrective and/or preventative actions.

The company should develop procedures to analyze incident data in order to identify deficiencies and opportunities for improvement in its management and protection programs and procedures.

References:

OPR-99 sections 6 and 52

CSA-Z662 Clause 10.2.2 (g)(h) and 10.14

PCR Part II section 13

Assessment:

As part of an O&M Agreement between EBPC and its Operator, all third party crossings activities outlined in the PCR are managed and executed by the Operator. EBPC's Facility Crossing Guidelines, as implemented by the Operator, outline the criteria and expected response to non-compliance such as unauthorized excavation and construction near the facilities. The criteria for reporting non-

compliance for crossing related activities are described in EBPC's Facility Crossing Guidelines and are in compliance with PCR requirements. Staff interviews confirm that they are familiar with the procedure for identifying and addressing unauthorized activity, which is to intervene if there is an immediate threat to public or worker safety and report the incident to the Coordinator.

Although the Operator's procedures include the requirement to report all instances of non-compliance to the NEB, interviews confirm that reporting is not being done following each instance of non-compliance as required by the PCR and the EBPC's Facility Crossing Guidelines. Instead, unauthorized activities are addressed with awareness sessions (formal or informal) delivered by the Coordinator.

The Operator was unable to demonstrate that it has implemented its process for reporting unauthorized activity as per its EBPC's Facility Crossing Guidelines and PCR Part II, Section 13.

Compliance Status: Non-compliant

4.3 Records Management

Expectations: The company shall establish and implement procedures to ensure that the records supporting the management and protection programs are retained, accessible and maintained. The company shall, as a minimum, retain all records for the minimum lengths of time as required by the applicable legislation, regulation and standards incorporated by reference into the regulation.

References:

OPR-99 sections 41, 51, 52, 56
CSA-Z662-07 Clause 10.2.2 (e) and 10.14
PCR Part II sections 10(c), 11(1) and 16

Assessment:

As part of an O&M Agreement between EBPC and its Operator, all third party crossings activities outlined in the PCR are managed and executed by the Operator.

All Brunswick Pipeline crossing related documents are maintained for the life of the pipeline. For example, RoW patrol records are maintained in SAIL by the Office Administrators. Office administrative staff also use the SAIL database to manage the maintenance records for the locate equipment. They use the manufacturer recommended maintenance schedule in SAIL to initiate the maintenance requests. Documents reviewed on site such as the schedule of maintenance and the certificates of calibration confirm this process is being executed as described.

Records relating to locates requested and performed as well as locate requests that are beyond the required locate distance and receive the "all clear" are also maintained. The Coordinator maintains the records for complex crossing projects as they are typically ongoing files. These files are also maintained for the life of the pipeline.

The Board verified that the Operator has a process to maintain records in accordance with regulations.
Compliance Status: Compliant
4.4 Internal Audit Expectations: The company shall develop and implement a documented process to undertake audits of its management and protection programs and procedures. The audit process should identify and manage the training and competency requirements for staff carrying out the audits. These audits shall be conducted on a regular basis.
References: OPR-99 section 53 CSA Z662-07 Clause 10.2.2(h)
Assessment: According to EBPC management, an independent audit of the Operator for all of the protection programs as required by the OPR-99 will take place. As the Brunswick Pipeline is still in its first year of operation, there would not be adequate information to conduct an effective audit of its operational programs relating to crossings. The Board recommends that the Operator conduct an audit of its programs against the PCRs and OPR-99 to ensure compliance with legal requirements and to verify that the programs are being implemented as designed.
Compliance Status: Compliant with recommendation
5.0 MANAGEMENT REVIEW Expectations: Senior management should formally review the management and protection programs for continuing suitability, adequacy and effectiveness. The review should be based on appropriate documentation and records including the results of the surveillance, monitoring and audit programs. This review should be formal and documented and should occur on a regular basis. The management review should include a review of any decisions, actions and commitments which relate to the improvement of the programs and the company's overall performance.
References: OPR-99 section 53 CSA Z662-07 Clauses 10.2.2 (h) (iii) PCR Part II, sections 4 and 5

Assessment:

See Appendix VII for the assessment of this element.

Compliance Status: See Appendix VII for the assessment of this element.

APPENDIX VI

EBPC PUBLIC AWARENESS PROGRAM AUDIT EVALUATION TABLE

<p>1.0 POLICY AND COMMITMENT</p> <p>1.1 Policy and Commitment Statements</p> <p>Expectations: The company shall have a policy approved and endorsed by senior management (the Policy). It should include goals and objectives and commit to improving the performance of the company.</p>
<p>References:¹</p> <p>OPR-99 sections 4, 47 and 48</p> <p>CSA Z662-07 Clause 10.2.2</p>
<p>Assessment:</p> <p>As part of an Operations and Maintenance (O&M) Agreement between EBPC and its Operator, the Operator is implementing and maintaining the Public Awareness Program (PA).</p> <p>According to the Operator’s Public Awareness Plan, “<i>the purpose of the[PA] program is to educate specific audiences on responsibilities surrounding, living and working near EBPC’s pipelines. Public Awareness is one of the key components of safe-guarding the integrity of the pipeline...</i>” According to the Operator’s staff responsible for implementing the plan, the PA program is part of the larger public safety policy and there are only minor changes to the PA Program each year. Since the EBPC project is currently completing the transition from construction to operation, there were additional awareness activities and messaging activities being completed by EBPC public relations staff.</p> <p>Both EBPC and the Operator were able to demonstrate that there is a policy that outlines the PA Program and its goals which is administered by the Operator’s senior staff.</p>
<p>Compliance Status: Compliant</p>
<p>2.0 PLANNING</p> <p>2.1 Hazards Identification, Risk Assessment and Control²</p>

¹ Each “Reference” in this table contains specific examples of the “legal requirements” applicable to each element but are not necessarily a complete list of all applicable legal requirements.

² Hazard: Source or situation with a potential for harm in terms of injury of ill health, damage to property, damage to workplace environment, or a combination

Expectations: The company shall be able to demonstrate a procedure to identify all possible hazards. The company should assess the degree of risk associated with these hazards. The company should be able to support the rationale for including or excluding possible risks in regard to its environment, safety, integrity, crossings and awareness and emergency management and protection programs (management and protection programs). The company should be able to implement control measures to minimize or eliminate the risk.

References:

OPR-99 sections 4(2), 37, 39, 40, 41
CSA-Z662-07 Clause 10.2, 10.14

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the PA Program.

Interviews with staff and policy review indicate that the Operator considers PA activities to be important controls in addressing the hazards imposed by third parties who live and work around the pipeline. The Public Awareness, Emergency Preparedness and Lands Coordinator (Coordinator) has developed the plan based on knowledge of activities in the area and groups that could potentially pose a risk to the pipeline. For example, all-terrain-vehicle (ATV) drivers on the Right-of-Way (RoW) have been identified as a hazard because it can cause rutting on the RoW and a disturbance for the landowner. As a result, the Operator staff contacted the local ATV and snowmobile associations to discuss the trespass and rutting issues. Another example of a local group that poses a hazard is the logging companies that are known to cross the pipeline with heavy loads. The Operator has worked to establish a relationship with these companies in the area to promote awareness of the pipeline. As part of the PA plan, the Coordinator contacts these groups annually to re-affirm the message about safe work and recreation on pipeline RoW.

It was verified that the Coordinators have assessed the risks that certain groups pose to the pipeline and have incorporated them into the PA Plan. Document review and interviews verified that the Operator has identified its hazards as it relates to PA activities and has implemented appropriate controls to minimize the associated risks.

Although the Operator evaluates the external hazards introduced by third parties to the pipeline, PA activities are not included in the Safety Program's Job Hazard Assessment which is intended to identify the possibility of any work related hazard for its employees. As public engagement activities introduce the potential for hostility from third parties, this hazard should be evaluated in the Operator's safety program. Given the Canada Labour Code requirement for a "Violence in the Workplace policy", the Board recommends that the Operator include PA activities among those assessed for hazards and that those risks be mitigated accordingly. (See Element 2.1 of

of these. Risk: Combination of the likelihood and consequence(s) of a specified hazardous event occurring

Appendix II- Safety Program)
Compliance Status: Compliant with recommendation
<p>2.2 Legal Requirements</p> <p>Expectations: The company shall have a verifiable process for the identification and integration of legal requirements into its management and protection programs. The company should have a documented procedure to identify and resolve non-compliances as they relate to legal requirements which includes updating the management and protection programs as required.</p>
<p>References: OPR-99 sections 4 and 6 PCR Part II sections 4 and 5 CSA Z662-07 Clause 10.2.2(g)</p>
<p>Assessment: As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the PA Program.</p> <p>For operational legal requirements, the Operator relies on staff participation in industry groups such as CSA and Canadian Energy Pipelines Association as well as regulatory updates posted on relevant government websites to relay regulatory information back to the appropriate staff for incorporation into procedures.</p> <p>Although the Operator has established a PA Program as required by the PCR, it has not yet assessed the effectiveness of the PA Program as required by the <i>National Energy Board Pipeline Crossing Regulations</i> (PCR) Part II subsection 4(2). Document review confirmed that the PCR Part II subsection 4 (2) requirement to assess the effectiveness of the program has been identified and included in the PA plan. However, the evaluation process or criteria was not available for evaluation. As the pipeline was in operation for less than one year an assessment of effectiveness had not been done at the time of the audit.</p> <p>The Board recommends that the Operator develop and implement a process to assess the effectiveness of the PA program as required in the PCR.</p>
Compliance Status: Compliant with recommendation
2.3 Goals, Objectives and Targets

<p>Expectations: The company should have goals, objectives and quantifiable targets relevant to the risks and hazards associated with the company's facilities and activities (i.e. construction, operations and maintenance). The objectives and targets should be measurable and consistent with the Policy and legal requirements and ideally include continual improvement and prevention initiatives, where appropriate.</p>
<p>References: OPR-99 sections 47 and 48 CSA-Z662-07 Clause 10.2.2(h) (ii)</p>
<p>Assessment: During the transition phase from construction to operation, EBPC's community relations strategy included a large awareness component and separate events were planned such as a celebration of the green space in Rockwood Park and a funding initiative for local volunteer fire departments. Although the EBPC public relations initiatives will be ongoing, the PA Program for the Brunswick Pipeline is managed and executed by the Operator in New Brunswick as part of an O&M Agreement. To that end, the Operator has integrated EBPC facilities into its existing PA plan that is currently developed, executed and tracked by the Coordinator. The Coordinator establishes annual goals and targets including the timing of the mail-outs and the number of the presentations to key audiences. The Coordinator also leverages other pipeline companies that are now in the area to support joint awareness activities. Along with presentations to target groups, they also submit "Call before you dig" ads for publication in local trade journals as well as sponsoring related events such as contractor breakfasts. All of these activities are recorded and tracked.</p> <p>The Board verified through documentation review including the PA Plan and confirmed that the Operator has set annual goals for the PA Program to ensure the appropriate audiences are receiving awareness information.</p>
<p>Compliance Status: Compliant</p>
<p>3.0 IMPLEMENTATION 3.1 Organizational Structure, Roles and Responsibilities Expectations: The company shall have an organizational structure that allows its management and protection programs to effectively function. The company should have clear roles and responsibilities, which may include responsibilities for the development, implementation and management of the management and protection programs.</p>
<p>References: OPR-99 sections 40, 47 and 48</p>

CSA-Z662-07 Clauses 10.2.1 and 10.2.2 (b)

Assessment:

As part of an O&M Agreement between EBPC and its Operator, the Operator is implementing and maintaining the PA Program.

The Coordinator is accountable for the development and the execution of the PA Program. This position reports to the RoW Manager of the northeast region in Head Office (Waltham, MA). According to the Operator's area and regional managers, the Coordinator position functions with little oversight of the awareness program. Although there is no direct supervision for this position in the office, interviews confirmed that the Coordinator reports his awareness activities for the Brunswick Pipeline facilities to EBPC staff.

The Coordinator is responsible for the planning and delivery of the various aspects of the PA Program from coordinating the mail-outs to conducting all of the presentations to key audiences both planned and on request. This position is the sole employee responsible for the delivery of public awareness for the Brunswick Pipeline with administrative assistance for the landowner mail-outs. During interviews, staff indicated that the delivery and maintenance of the PA Program requires approximately 20% of his overall time. This position also has senior level responsibilities with the third party crossings and emergency response programs.

Although the Board verified that the current structure allows for the execution of the PA Program as described in the existing PA Plan. However, if circumstances change, enhancements to the program are required, or the number of PA activities required increases over time, the Operator may not be able carry out its PA Program with the current level of staffing. It is therefore recommended that the Operator review the resourcing of the PA Program to ensure that the program continues to meet awareness needs and the regulatory requirements for effectiveness.

Compliance Status: Compliant with recommendation

3.2 Management of Change

Expectations: The company shall have a management of change program. The program should include:

- identification of changes that could affect the management and protection programs;
- documentation of the changes; and
- analysis of implications and effects of the changes, including introduction of new risks or hazards or legal requirements.

References:

OPR-99 section 6
CSA-Z662-07 Clause 10.2.2 (g)

Assessment:

With the Brunswick Pipeline in its operational phase, EBPC has included the management and implementation of the PA Program in the O&M Agreement with the Operator. Although there was no formal re-evaluation of the PA program as a result of the Brunswick Pipeline facilities, there was an evaluation of the impact of increased number of landowners on the PA program. Based on this evaluation, it was determined that additional administrative support was required to assist with PA program meeting its targets.

Although the Operator had an initiative underway to develop and implement a formal management of change (MOC) program for its protection programs, at the time of the audit, the Operator did not demonstrate that the PA Program would be included in the MOC program.

Compliance Status: Non-compliant**3.3 Training, Competence and Evaluation**

Expectations: The company shall have a documented training program for employees and contractors related to the company's management and protection programs. The company shall inform visitors to company maintenance sites of the practices and procedures to be followed. Training requirements should include information about program-specific policies. Training should include emergency preparedness and environmental response requirements as well as the potential consequences of not following the requirements. The company should determine the required levels of competency for employees and contractors. Training shall evaluate competency to ensure desired knowledge requirements have been met. Training programs should include record management procedures. The training program should include methods to ensure staff remains current in their required training. The program should include requirements and standards for addressing any identified non-compliances to the training requirement.

References:

OPR-99 sections 28, 29, 30 (b), 46, 47, 48 and 56
CSA Z662-07 Clause 10.2.2(c)

Assessment:

With the Brunswick Pipeline in its operational phase, EBPC has included the management and implementation of the PA Program in the O&M Agreement with the Operator.

Review of the Operator's training program concluded that the Coordinator receives communication training as part of the Emergency Management Program. Document review revealed that there was no training given related specifically to PA activities and no evaluation had been done to identify training requirements. At the time of the audit, skill development for routine PA activities had not

been evaluated to determine if additional training was required. Interviews confirmed that there are no succession plans in place for this position. Instead, as a long term employee working in the area, the Coordinator relies on his considerable and varied experience to perform his PA related duties and respond to concerns.

The Operator did not demonstrate that it has included identifying training needs for PA activities in its Training Program to ensure the ongoing effectiveness as required.

Compliance Status: Non-compliant

3.4 Communication

Expectations: The company should have an adequate, effective and documented communication process(es):

- to inform all persons associated with the company's facilities and activities (interested persons) of its management and protection programs policies, goals, objectives and commitments;
- to inform and consult with interested persons about issues associated with its operations;
- to address communication from external stakeholders;
- for communicating the legal and other related requirements pertaining to the management and protection programs to interested persons;
- to communicate the program's roles and responsibilities to interested persons.

References:

OPR-99 sections 18, 28 and 29
CSA Z662-07 Clause 10.2. 2 (d)
PCR Part II sections 4 and 5

Assessment:

With the Brunswick Pipeline in its operational phase, EBPC has included the management and implementation of the PA Program in the O&M Agreement with the Operator.

According to staff, the Coordinator reviews the PA program and adjusts it as required. The target audiences have been identified based on landowner issues and groups that will be working around the pipelines. Presentations to high risk groups are an essential component of a PA program. The Board reviewed the presentations for content and considered them to be comprehensive and appropriate for the intended audiences. The Coordinator also receives requests to conduct tailored presentations from groups such as municipalities, ATV associations, forestry contractors and park rangers. The Operator also partners with local construction companies, other buried

infrastructure companies to hold contractor breakfasts and sponsor ads about safe digging in local trade journals. The Operator conducts an annual mail out for all Landowners in New Brunswick to remind them of the safety considerations when working around the pipeline. The Brunswick Pipeline website is another aspect of the communication with external stakeholders. It was confirmed that the website provides adequate safety and contact information related to presence of the pipeline and the instructions for contacting the Operator for permission to conduct work near the pipeline.

Document review and interviews confirmed that the Operator has communication processes in place that allow it to effectively communicate activities related to its pipelines with external stakeholders. Internal communication with EBPC takes place in the weekly calls. External PA activities are discussed as a standing agenda item.

Although there are several communication mechanisms in place, the Operator could not demonstrate that there is a formalized and implemented overarching communication plan that outlines the distribution of various types of information to appropriate parties. While interviews confirmed communication is occurring through the means identified above, without a formal communication plan, the Operator cannot ensure that all stakeholders and interested parties are receiving the appropriate information in a timely fashion.

Although there is communication regarding awareness activities occurring, the Board recommends that the Operator include PA program related information into the overarching formalized communication plan.

Compliance Status: Compliant with recommendation

3.5 Documentation and Document Control

Expectations: The company should have documentation to describe the elements of its management and protection programs- where warranted. The documentation should be reviewed and revised at regular and planned intervals. Documents should be revised immediately where changes are required as a result of legal requirements or where failure to make immediate changes may result in negative consequences. The company should have procedures within its management and protection programs to control documentation and data as it relates to the risks identified in element 2.0.

References:

OPR-99 section 27
CSA-Z662 Clause 10.2.2 (e)(f)
PCR Part II sections 10 and 11

Assessment:

With the Brunswick Pipeline in its operational phase, EBPC has included the management and implementation of the PA Program in the O&M Agreement with the Operator required by the PCR Part II.

The Operator manages the PA Program related documentation in the Fredericton, NB office. The administrator maintains the system manually by posting most recent procedures on the Area Share-point site which is available on an internal network. The administrator also plays a key role in the control of changes to the Operations and Maintenance Procedures which are executed through revision request forms. Once the procedure is changed, the administrator posts the new procedures to the internal network. The administrator is the central resource for controlling the process related documents and reports. The Coordinator maintains the PA related documents and presentations used for the in hard copy.

The Operator provided documentation which describes its PA Program, and demonstrated that changes to the document are controlled and the most current versions are made available electronically.

Compliance Status: Compliant**3.6 Operational Control-Normal Operations**

Expectations: The company should establish and maintain a process to develop, implement and communicate mitigative, preventive and protective measures to address the risks and hazards identified in elements 2.0 and 3.0. The process should include measures to reduce or eliminate risks and hazards at their source, where appropriate.

References:

OPR-99 sections 27-49

CSA Z662-07 Clauses 10.2.2 (f) & 10.3.1

PCR Part II sections 4 and 5

Assessment:

With the Brunswick Pipeline in its operational phase, EBPC has included the management and implementation of the PA Program in the O&M Agreement with the Operator.

According to the PCR, the company must have a program that makes people aware of the pipeline and provides them with instructions for obtaining permission to work safely around the pipeline. The PA Plan was reviewed on site to verify that it included all required safety information for those people who live and work around the pipeline. Interviews with staff conclude that the PA plan is

developed based on the risks by third parties and PA activities are developed to mitigate those risks. The Operator's program has evolved over time to include not only landowners, but other potentially relevant parties such as local excavators, municipalities and local outdoor activity associations. It also includes forestry companies as they tend to carry heavy loads over the pipeline.

It was verified that the Operator has implemented a process to communicate mitigative, preventive and protective measures to address the hazards and risks associated with its activities.

Compliance Status: Compliant

3.7 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 emergency events).

References:

OPR-99 sections 32, 52
CSA-Z662-07 Sections 10.3.2 and 10.14

Assessment:

Upset conditions for crossing related activities would constitute an emergency and would be mitigated as per the Emergency Response Plan. It was verified that the Operator has conducted table tops that tested these types of emergency such as third party damage. The Emergency Preparedness and Response (EPR) Program was evaluated as a distinct program as part of this audit. For an evaluation of the EPR Program refer to Appendix IV of this report.

Compliance Status: N/A

4.0 CHECKING AND CORRECTIVE ACTION

4.1 Inspection, Measurement and Monitoring

Expectations: The company shall develop and implement surveillance and monitoring programs. These programs should address contract work being performed on behalf of the company. These programs should include qualitative and quantitative measures for evaluating the management and protection programs and should, at a minimum, address legal requirements as well as the risks identified as significant in elements 2.0 and 3.0. The company should integrate the surveillance and monitoring results with other data

in risk assessments and performance measures, including a proactive trend analysis. The company shall have documentation and records of its surveillance and monitoring programs.

References:

OPR 99 sections 36 and 39

CSA-Z662-07 Clauses 9 and 10

PCR Part II sections 4, 5, 10 and 14(1)

Assessment:

With the Brunswick Pipeline in its operational phase, EBPC has included the management and implementation of the PA Program in the O&M Agreement with the Operator.

As noted elsewhere in this report, the Coordinator reviews the PA program annually to ensure that there is contact with the identified target groups. These target audiences have been identified based on landowner issues and groups that will be working around the pipelines. The Operator demonstrated that it tracks and reports on awareness activities conducted in a given year. The Board reviewed the awareness material and presentations and did not note any deficiencies in the information. However, the Board could not verify that the Operator had formally assessed the effectiveness of the PA program as required by the PCR.

The Operator was not able to demonstrate that there has been an evaluation of the effectiveness of the awareness program and maintained a record of the assessment as required by the PCR, Part II subsection 4(2).

Compliance Status: Non-Compliant

4.2 Corrective and Preventive Actions

Expectations: The company shall have a process to investigate incidents or any non-compliance that may occur. The company shall have a process to mitigate any potential or actual issues arising from such incidents or non-compliances. Such mitigation may include appropriate timing and actions for addressing the issues that arise. The company shall demonstrate that it has established a documented procedure to:

- set criteria for non-compliance;
- identify the occurrence of any non-compliances;
- investigate the cause(s) of any non-compliances;
- develop corrective and/or preventative actions; and
- effectively implement the required corrective and/or preventative actions.

<p>The company should develop procedures to analyze incident data in order to identify deficiencies and opportunities for improvement in its management and protection programs and procedures.</p>
<p>References: OPR-99 sections 6 and 52 CSA-Z662 Clause 10.2.2 (g)(h) and 10.14 PCR Part II section 13</p>
<p>Assessment: With the Brunswick Pipeline in its operational phase, EBPC has included the management and implementation of the PA Program in the O&M Agreement with the Operator.</p> <p>In addition to conducting PA presentations as a preventive measure, the Operator uses PA activities and related material to mitigate non-compliances with the PCR by providing information and presentations regarding safe work practices to parties that have contravened the PCR. Depending on the severity of the activity and the likelihood of a recurrence, the Coordinator will conduct safety presentations or awareness sessions with the offenders to ensure that the parties are well-informed of the regulations and safety requirements.</p>
<p>Compliance Status: Compliant</p>
<p>4.3 Records Management Expectations: The company shall establish and implement procedures to ensure that the records supporting the management and protection programs are retained, accessible and maintained. The company shall, as a minimum, retain all records for the minimum lengths of time as required by the applicable legislation, regulation and standards incorporated by reference into the regulation.</p>
<p>References: OPR-99 sections 41, 51, 52, 56 CSA-Z662-07 Clause 10.2.2 (e) and 10.14 PCR Part II sections 10(c), 11(1) and 16</p>
<p>Assessment: With the Brunswick Pipeline in its operational phase, EBPC has included the management and implementation of the PA Program in the O&M Agreement with the Operator. The Operator maintains records of PA activities in the New Brunswick office which include</p>

records of each event attended and each presentation given. Information such as the list of stakeholder groups as well as participation in awareness activities with other agencies promoting safe work practices around buried infrastructure can also be found in the office. Document review onsite confirmed that records of PA activities have been maintained in the Fredericton, New Brunswick office since the program was established.

Records containing landowner contact information are also integral to the success and effectiveness of the annual mailout of awareness material. The Coordinator uses a database to manage landowner contact information. Review of records management procedures and interviews with field staff found the following deficiencies in the process for managing this information:

- Verification of the accuracy of the landowner information takes place following the annual mail-outs. Staff make corrections when the letters are sent back “return to sender” or the new residents contact them to correct the addressee information. This process relies heavily on the new residents self-identifying by returning mail and could result in the inaccuracy of the information.
- Damage prevention awareness information is mailed to known landowners. People who are renting properties along the right of way receive damage prevention awareness material only as part of the Emergency Management program. As such, it is unclear whether they are made aware that they reside not only in the Emergency Planning Zone, but on a property with a pipeline easement. Those people who live on an easement have legal obligations, safety considerations as well as expectations of the pipeline company over and above those of other EPZ residents. The company should ensure that they are aware of the distinction.

During interviews field staff indicated that there is not a rapid rate of landowner turnover. However, as development encroaches on the pipeline, the current system of managing landowner information may not allow EBPC’s awareness material in the future to reach the people who need to know and would put EBPC in non-compliance.

The Board recommends that the Operator reassess the maintenance procedure for landowner contact information as well as how they ensure people residing on an easement are informed about damage prevention to ensure that the PA Program can remain effective in communicating to landowners.

Compliance Status: Compliant with recommendation

4.4 Internal Audit

Expectations: The company shall develop and implement a documented process to undertake audits of its management and protection programs and procedures. The audit process should identify and manage the training and competency requirements for staff carrying

out the audits. These audits shall be conducted on a regular basis.
References: OPR-99 section 53 CSA Z662-07 Clause 10.2.2(h)
Assessment: With the Brunswick Pipeline in its operational phase, EBPC has included the management and implementation of the PA Program in the O&M Agreement with the Operator. According to the PCR, companies must assess the effectiveness of the PA program. As the Brunswick Pipeline is still in its first year of operation, there would not be adequate information to conduct an effective audit of its operational programs relating to public awareness. The Board recommends that the Operator conduct an audit of the management and protection programs including Public Awareness to ensure compliance with legal requirements and to verify that the programs are being implemented as designed.
Compliance Status: Compliant with recommendation
5.0 MANAGEMENT REVIEW Expectations: Senior management should formally review the management and protection programs for continuing suitability, adequacy and effectiveness. The review should be based on appropriate documentation and records including the results of the surveillance, monitoring and audit programs. This review should be formal and documented and should occur on a regular basis. The management review should include a review of any decisions, actions and commitments which relate to the improvement of the programs and the company's overall performance.
References: OPR-99 section 53, CSA Z662-07 Clauses 10.2.2 (h) (iii), PCR Part II, sections 4 and 5
Assessment: See Appendix VII for the assessment of this element.
Compliance Status: See Appendix VII for the assessment of this element.

APPENDIX VII

EBPC MANAGEMENT REVIEW AUDIT EVALUATION TABLE

5.0 MANAGEMENT REVIEW

5.1 Management Review

Expectations: Senior management should formally review the management and protection programs for continuing suitability, adequacy and effectiveness. The review should be based on appropriate documentation and records including the results of the surveillance, monitoring and audit programs. This review should be formal and documented and should occur on a regular basis. The management review should include a review of any decisions, actions and commitments which relate to the improvement of the programs and the company's overall performance.

References:

<u>Environment:</u> OPR-99 section 53 and 55 CSA Z662-07 Clause 10.2.2 (h) (iii)	<u>Safety:</u> OPR-99 section 53 and 55 CSA Z662-07 Clause 10.2.2 (h) (iii)	<u>Integrity:</u> OPR-99 sections 4, 40, 53 and 55 CSA Z662-07 Clauses 10.2.2 (h) (iii) and 10.14.1	<u>Crossings and Awareness:</u> OPR-99 section 53 CSA Z662-07 Clauses 10.2.2 (h) (iii) PCR Part II, sections 4 and 5	<u>Emergency Management:</u> OPR-99 section 53 and 55 CSA Z662-07 Clause 10.2.2(h)(iii)
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Assessment:

The expectations for Management Review describe the Board's expectation for anticipated level of oversight, direction and communication that the Board requires of the certificate holder's senior management. In the case of the Brunswick Pipeline, the responsibility of the development and maintenance of all operational programs has been designated by EBPC, the certificate holder, to the Operator through an Operations and Maintenance (O&M) Agreement. While the O&M agreement describes the responsibilities of the designated Operator, the Board expects that the certificate holder demonstrate adequate oversight and monitoring of and direction to the Operator, regardless of the Operator's depth of experience. It is the expectation of the Board that EBPC formally and actively oversee processes including the review of contracts, reporting and communication processes in place in order to ensure that the continued suitability of the operational programs and the adequacy with which these programs address the hazards and risks while remaining in compliance with all applicable legal requirements.

To establish EBPC's level of oversight of the operational programs, the Board conducted interviews and examined the documentation that resulted from the formal and informal interactions between EBPC and its Operator. The Board was able to ascertain the nature of the information exchanged by reviewing the content of the Operations and Maintenance Agreement, senior management committee structures, standing agenda items, meeting minutes and reports. Document review confirmed that EBPC monitored its Operator's progress in meeting the goals targets and objectives. EBPC indicated that it discusses objectives at the beginning of the year, at least once during the year and again at the end of the year when the past year's performance is evaluated and objectives are established for the next year. EBPC Management indicated that it reviews the Operator's messages to internal and external stakeholders to ensure consistency with EBPC expectations. EBPC Management was also demonstrating a degree of the required oversight by reviewing reports and monitoring operational activities such as right-of-way patrols, safety incidents, facility operations and maintenance review.

EBPC Management also indicated that it intends to apply Emera Inc.'s Environmental Management System to provide guidance to the Operator by outlining its regulatory requirements and expectations. It was confirmed that the elements are aligned with the intent of the program requirements of OPR-99. According to EBPC, it intends to audit the compliance and suitability of the program by applying a combination of the Operator's internal audit process and Emera Inc.'s Environmental Management System audit requirements. At the time of the audit however, EBPC could not demonstrate that it had formally reviewed the programs developed by the Operator to ensure their suitability in meeting its regulatory obligations.

The Board expects that the certificate holder is able to demonstrate oversight and review of the development and implementation of appropriate processes for the measuring and monitoring the activities undertaken on its behalf. This oversight is required in order to ensure ongoing compliance with its certificate(s) and regulatory requirements. Record review confirmed that EBPC staff participate in regularly scheduled operations and maintenance management meetings with the Operator.

In order for EBPC to be meet the regulatory obligations of a certificate holder, it must demonstrate that its senior management is actively and formally directing and measuring the development of effective and compliant programs. This active direction includes the establishment of requirements for managing and monitoring programs to ensure they are functioning for the identification, communication and mitigation of hazards, the integration of legal requirements and the establishment of goals and targets using a formal and documented reporting process. EBPC was able to demonstrate that it routinely requests follow-up on issues identified to ensure corrective and preventative actions are performed according to the procedures.

It was noted that the Operator was conducting internal audits and formal reviews of its Environmental Health and Safety Management System as required by OPR 99. The audit report also noted that the Operator was not conducting the assessment that is required in the *Pipeline Crossing Regulations*. When reviewing the existing information sharing processes between EBPC and the Operator, the Board could not verify that the results of the Operator's 2009 program audits were being communicated with EBPC or that there was a communication process in place to ensure appropriate distribution of the reports.

During the audit, EBPC provided documentation that demonstrated that there was a level of oversight occurring for the operational programs. As noted throughout this audit report, EBPC and the Operator were communicating on a regular basis concerning the Brunswick Pipeline and related activities. There are routinely scheduled meetings occurring that follow a set agenda and where updates are provided. However, as discussed in Element 3.4 Communication, there is a lack of a formal communication process between EBPC and its Operator. Without a plan in place, the Board could not confirm that EBPC was receiving and reviewing all of the necessary information from each program to support the oversight required to meet the Board's expectations.

EBPC could not demonstrate that it had formally reviewed the operational programs to ensure they were meeting all applicable regulatory requirements or managing the hazards and risks associated with its activities.

Compliance Status: Non-Compliant



Appendix VIII – EBPC and Operator Representatives Interviewed

Corporate Office (Waltham, MA)

- [REDACTED], SET VP, NE Region Operations
- [REDACTED], SET Director EHS
- [REDACTED], SET Director Technical Ops
- [REDACTED], SET Manager Environmental
- [REDACTED], SET Manager, Health and Safety
- [REDACTED], SET Manager Pipeline Integrity
- [REDACTED], General Manager, Field Operations, NE
- [REDACTED], Contracts Administrator
- [REDACTED], SET Manager Measurement and Communication
 - VP Audit Services (telephone interview)
 - Manager EHS Audit
 - Division Tech Specialist
 - Senior Engineer
 - Senior Tech Specialist

Saint John, NB

- [REDACTED], Emera Brunswick Pipeline Director Regulatory Affairs
- Robert Belliveau, General Manager
- [REDACTED], Measurement Technician
- [REDACTED], Corrosion technician
- [REDACTED], Pipeliner

Fredericton, NB

- [REDACTED], Area Manager
- [REDACTED], Admin Assistant NB Operations
- [REDACTED], Lands and Public Awareness Coordinator
- [REDACTED] – Senior Engineer

Halifax, NS

- [REDACTED], EHS Specialist



Appendix IX – EBPC Documents Reviewed

General

Document Name	Date
Emera Brunswick Company Ltd. NEB Application, Brunswick Pipeline, p. 5, 17-19, 50-52	2008
Brunswick Pipeline response to NEB Information Request 1.1	20-Jul-06
Brunswick Pipeline response to Anadarko Information Request 1.4	28-Jul-06
Brunswick Pipeline response to Anadarko Information Request C04-ANA 2	15-Aug-06
Redacted Operating and Maintenance Agreement between Emera Brunswick Pipeline Company Ltd. And St. Clair Pipelines (1996) Ltd. (Attachment Anadarko 1.4 (a)(2))	
Reasons for Decision (GH-1-2006) p. 15-16	
Draft Brunswick Pipeline Inc. Environmental Management Systems	
Brunswick Pipeline - Redacted 2010 Budget	5-Feb-10
Weekly Operations Conference Call between EBPC and MNP	Nov. 5, 2009 Mar. 4, 2010 Mar. 18, 2010 April 7, 2010 April 15, 2010
Brunswick Pipeline Construction Progress Report - redacted	15-Jun-10
Brunswick Pipeline Operations Update - redacted	15-Jun-10
Annual Plan - Major Activities and Timing to Board of Directors Q1-Q4 - redacted	2010
Major Activities and Timing Q1	2010
Major Activities and Timing Q2	2010
Monthly conference call between Maritimes US and EMERA re. measurement (Agenda and Attendees)	4/12/2010 5/12/2010
Notes from meeting with Spectra and EBPC - O&M Meeting (Annual meeting)	July 23, 2009

Environment and Safety Programs

Document Name	Date
2007 EHS Management System Risk Assessment SET US Operations	2007
2008 Validation of 2007 EHS Management System Risk Assessment SET US Operations	2008
2009 Validation of 2007 EHS Management System Risk Assessment SET US Operations	2009
2010 Beaver control file (a.k.a Dossier de Castor)	2010
2010 Goals - US Operations (Includes US EHS Goals)	2010
Attendance Record, Contractor Safety Procedures, Northeast, New Glasgow	10-Mar-10
Attendance Record, Montie Safety CPR Refresher Training	24-Jun-10
Brunswick Pipeline Project Environmental Issues Report (O&M Phase) - WC - Tributary to Hazen Creek	9-Jul-10
Brunswick Pipeline Project Environmental Issues Report Form (Operation and Maintenance Phase)	
Brunswick Pipeline Project Environmental Issues Report (O&M Phase) - Beyea Brook	9-Jul-10



Brunswick Pipeline Project Environmental Requirements and Supporting Documentation Operation and Maintenance Phase	12-May-09
Certificate of Attendance, Workplace Electrical Safety Workshop based on CSA Z462, [REDACTED]	8-Jun-10
Chainsaw bucking, felling awareness, clearing saw awareness	6-Nov-09
Contractor Performance Summary Spectra Energy	24-Mar-10
Contractor Safety Procedures Training	
Defensive Driving	2-Dec-04
EHS Facility Risk Assessment Program, rev 1	Jan-10
EHS Management System Audit	27-Jul-09
EHS Risk Registry Guide	31-Aug-09
EHS Role Description Document, Area Manager	18-Feb-09
EHS Role Description Document, Supervisor/District Manager	18-Feb-09
EHS Role Description Document, Technician trainee, Technician	18-Feb-09
Emera Overview	
Epass - Environmental Performance and Safety System	
Eureka Emergency Mock Exercise	2009
Field Audit - Eliot Compressor Station	16-Jun-09
Fire extinguisher training course, certificate of completion (staff in New Glasgow)	16-Jul-09
H&S Management of Change Process/Form	30-Jun-09
H2S Alive Training certificate, [REDACTED] and [REDACTED]	16-Apr-10
Health and Safety Facility Inspection Checklist, Stoney Point	2010
Health and Safety SOP Table of Contents	12-Apr-10
IWOL - Chatham Office Incident Report	29-Jun-10
Levels of EHS Responsibility for SET	1-Oct-2008
Lift Truck Operator Safety Training Program, [REDACTED], [REDACTED], [REDACTED] [REDACTED] t, [REDACTED], [REDACTED]	8-Mar-10
Line Locator Re-certification, [REDACTED]	29-Jan-07
Management System Review Performance Standard 9.4, rev 2	Sep-06
Monthly SET US Audit Assurance Summary Report	28-Feb-10
Monthly SET US Audit Findings Status Report	28-Feb-10
Monthly SET US Audit Findings Status Report	31-Mar-10
Monthly SET US Audit Assurance Summary Report	31-Mar-10
Personal Safety Action Plan, three different employees	2010
Pre-job Safety Meeting	26-Mar-10
Project Safety Inspection Form	24-Mar-2010
Project Services Agreement (Non-construction)	21-Apr-10
Project Services Agreement (Non-construction) between Eastern Gas Pipeline Incorporated and Maritimes and Northeast Pipeline Limited Partnership (File includes Pre-job Safety meeting Reports and Project Safety Inspection Reports)	11-Aug-09
Quarterly Employee Meeting, Slides Information	12-May-10
Risk Registry for Union Church, MS - Environmental	2-Dec-09
ROW Mowing Schedule	2009
ROW Mowing Schedule	2010
Safety and Communications Agenda and Minutes, NS Operations	11-Mar-10
Safety and Communications Agenda and Minutes, NS Operations	20 May 20010



Safety Meeting Minutes - Attendance Record	April 10, 2010 March 16, 2010 January 1, 2010
Scaffolding Basics, Certificate, [REDACTED]	26-Feb-10
Scope of work & EHS Risk Communication (Form 7T-311)	23-Mar-10
SET Canadian Northeast Operations EHS Management System Audit #09ECD-001	Sep-09
SET Maritimes Provinces EHS Training Assignments	18-Mar-10
SET Operations Committee Charter	Jan-07
SET Operations Control Table - in progress	2009
SET West Legal Registry	Apr-10
Spectra Energy EHS Committee 2010 Objectives	2010
Spectra Energy Operations Committee 2010 Objectives	2010
Spectra Energy Audit Coordination for US Operations, Integrating, Enhancing and Streamlining Current Processes	10-Nov-09
Spectra Energy Charter	Jan-10
Spectra Energy EHS Blended Scorecard	May-10
Stop Work Order, pipeline installation, excavation	28-Jan-08
Tabletops	2008
Tabletops	2007
TDG certificate, [REDACTED]	3-Apr-09
Training - Learning Management System Records - District Operation Technician (Nova Scotia)	
Training Session Attendance Sheet, Respirator Training	20-May-10
Truck/Trailer Combination Safety Seminar, [REDACTED]	30-Apr-09
US Transmission Contractor Safety Procedures	1-Mar-10
Vendor Report - Contractor Information Database	
Veriforce - Modifications to tasks 412 - 418 and 609 - Low impact changes	23-Sep-09
Workplace Standard First-Aid CPR A, AED, [REDACTED]	14-Dec-07
E-mail from Emera Safety Manager identifying safety records needed from Spectra Energy to ensure due diligence	20-Feb-10
Emera Inc's Environmental Audit of Brunswick Pipeline	August 10-14, 2009
EBPC's Response to Emera Inc.'s Environmental Audit of Brunswick Pipeline	28-Sep-09
Spectra Energy Monthly Safety Report to Brunswick Pipeline	1-Apr-10

Integrity Management Program

Document Name	Date
Anomaly Investigation 2008 12" Halifax PRS to Nova Scotia Power	2008
Anomaly Investigation 2009 12" Halifax TAP to PRS	2009
Anomaly Investigation 8" Point Tupper to Point Hawkesbury	2009
Brunswick Pipeline - 2010 Annual Corrosion Review Meeting	February 9-10, 2010
Brunswick Pipeline Procedure: Communication: Emera Notification Form - Planned Release	
Brunswick Pipeline Procedure: Communication: Emera Notification Form - Unplanned Release	



Brunswick Pipeline Procedure: Communication: Notification Plan - Planned Release	
Brunswick Pipeline Procedure: Communication: Notification Plan - Unplanned Release	
Brunswick Pipeline Procedure: Communication: Westcoast Notification Form - Planned Release	
Brunswick Pipeline Procedure: Communication: Westcoast Notification Form - Unplanned Release	
Dynamic Risk Assessment Systems Inc. Internal Corrosion Algorithm	
Eastern Canada - Pipeline Integrity Assessments	
Eastern Canada - Risk Data	
Form 7T-33AW for wheel count 132785.5 internal corrosion anomaly (from Binder: Anomaly Investigation 8" Point Tupper to Hawkesbury Gold_1 KP387 to Baileyville - Pipeline Listing	20-May-09
Installation, Operation and Maintenance Manual for Horizontal Bandlock™2 Closure	2007
Pigging Training CD	7-Jul-10
Section 11.10 Water Vapor Determination	
SET Annual Cathodic Protection Survey	2009
SET Internal Corrosion Monitoring and Mitigation	8-Jun-10
SET SOP - Measuring Station Shut-in, Gas Quality, Volume 3	1-Jan-07
SET SOP - Pigging and Pig Trap Operation, Volume 1	30-Apr-10
SET SOP - SOP Administration, Volume 2	9-Apr-10
Spectra Energy Gas Transmission Area Pipeline Managers and Supervisors	
Spectra Energy Material/Equipment Specification Line Pipe Internal Coating	4-Dec-03

Emergency Preparedness and Response Program

Document Name	Date
Brunswick Pipeline - EPR Program Annual Review Meeting Minutes/Findings	30-Mar-10
Brunswick Pipeline Emergency Preparedness & Response Program Compliance Documentation Section 1 - Introduction	2009
Brunswick Pipeline Emergency Preparedness & Response Program Compliance Documentation Section 2 - Risk Assessment	2009
Brunswick Pipeline Emergency Preparedness & Response Program Compliance Documentation Section 3 - Agency List	2009 and 2010
Brunswick Pipeline Emergency Preparedness & Response Program Compliance Documentation Section 4 - Agency Liaison Program	
Brunswick Pipeline Emergency Preparedness & Response Program Compliance Documentation Section 4 - Agency Liaison Program	2009 and 2010
Brunswick Pipeline Emergency Preparedness & Response Program Compliance Documentation Section 5 - Public Continuing Education Program	2009
Brunswick Pipeline Emergency Preparedness & Response Program Compliance Documentation Section 6 - Emergency Preparedness Manuals	
Brunswick Pipeline Emergency Preparedness & Response Program Compliance Documentation Section 7 - Training	2009
Brunswick Pipeline Emergency Preparedness & Response Program Compliance Documentation Section 8 - validation	2009



Brunswick Pipeline Safety and Emergency Planning for Zone Residents	
Brunswick Pipeline Saint John Field Exercise/Mock Emergency Binder	25-May-09
EBPC First Responder Presentation	
M&NP and Brunswick Pipeline Accu-link Weekly on call cell phone testing	2010

Crossings and Public Awareness Programs

Document Name	Date
2009 Performance Review Report - Lands/Public Awareness Coordinator	22-Feb-10
Accu-Link Call Centers Business Schedule	Jun-08
Brunswick Pipeline As-Built Requests 2009	2009
Brunswick Pipeline Calibration Certificates	
Brunswick Pipeline City of Saint John Freeman - Bayside 4 Crossings File	Apr-08
Brunswick Pipeline Contractor Safety Information	
Brunswick Pipeline Facilities Crossing Guidelines	Oct-08
Brunswick Pipeline File on City of Saint John Gault Road Crossing	2010
Brunswick Pipeline Letter of Commitments	Aug-06
Brunswick Pipeline Line Locates All Clear	January 2010 - April 2010
Brunswick Pipeline Monthly Aerial Patrol Reports	2010
Brunswick Pipeline O&M Specifications Manual Locating and Excavating	Oct-08
Brunswick Pipeline O&M Specifications Manual Work On Live Lines, rev 1	May-10
Brunswick Pipeline Operation and Maintenance Specifications Manual: Pipeline Patrols and Surveys	Oct-08
Brunswick Pipeline Public Awareness New Brunswick Operations	2009-2010
Crossings File - Landowner	10-Jan-00
EBPC Public Awareness Presentation	
Encroachment Management Forms	
Line Locate Flow Chart	
Schedule of Training and Training Records for Five Multi Discipline Techs in Fredericton, NB	various
SET Pre-job Safety Meeting - Crossing Construction	18-Jun-08
SET SOP Volume 1 - Pipeline: Aerial Pipeline Patrol	8-Jun-10
SET SOPs Volume 1 - Pipeline: RoW Encroachments	8-Jun-10