

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) 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 Regulations, 1999* (OPR-99) came into force 1 August 1999 reflecting the NEB's intent to progress from prescriptive regulation to management system (MS) 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: Westcoast Energy Inc., a wholly owned subsidiary of Spectra Energy Corp (Spectra).¹

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.

¹ For the purposes of this audit report Spectra will refer to Spectra Energy Corp. and any company related to or controlled by it.



Finding: The evaluation or determination of the adequacy of programs or elements in meeting the requirements of the *National Energy Board Act* (NEB Act), Regulations and Part II of the *Canada Labour Code* (CLC).

Compliant: A program element meets legal requirements. The company has demonstrated that it has developed and implemented its programs, processes 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, processes 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 Maritimes & Northeast Pipeline Management Ltd.'s (M&NP) level of compliance with: the NEB Act, the OPR-99, the *National Energy Board Pipeline Crossing Regulations, Part I* and the *National Energy Board Pipeline Crossing Regulations, Part II* (either or both are hereinafter referred to as "PCR"), and regulations made under Part II of the CLC, in relation to the M&NP System.

4.0 Audit Scope

The scope of this audit included M&NP's integrity, safety, environment, emergency preparedness and response, crossings and public awareness programs which have been developed and implemented for the M&NP System to meet the requirements of the NEB Act, OPR-99, PCR and Part II of the CLC.

The NEB-regulated M&NP System includes a total of 874 kilometers of transmission pipeline built to transport natural gas from developments offshore Nova Scotia to markets in Atlantic Canada and the northeastern United States (U.S.). The pipeline system consists of a 30 inch diameter underground mainline running from Goldboro, Nova Scotia through Nova Scotia and New Brunswick to the Canadian - U.S. border. The system consists of:

- Mainline – 567 km (30 inch);
- Point Tupper Lateral - 60 km (8 inch/6 inch);
- Halifax Lateral – 124 km (12 inch);
- Saint John Lateral - 103 km (16 inch);
- Moncton Lateral - 12 km (8 inch); and
- Utopia Spur – 8 km (4 inch).



5.0 Audit Process

The Board decided to audit M&NP by using a risk-based approach that included a review of documented performance indicators. Additionally, the Board also considered the time period since the Board last audited M&NP. The last audit took place in 2001-2002.

The NEB notified M&NP in a letter dated 18 March 2010 of its intent to conduct an audit on the NEB-regulated M&NP System. On 29 April 2010, an opening meeting was conducted with representatives from M&NP in Saint John, New Brunswick 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 M&NP staff interviewed, refer to Appendix VIII. For a list of documents and records reviewed for each program audited, refer to Appendix IX.

M&NP is headquartered in Halifax, Nova Scotia and operates an additional business office in Waltham, Massachusetts. M&NP is the certificate holder for this pipeline system. M&NP entered into an Operating and Maintenance (O&M) Agreement with St. Clair Pipelines (1996) Ltd. With the dissolution of St. Clair Pipelines (1996) Ltd., this agreement was transferred to Westcoast Energy Inc.

The Operator developed and implemented the programs that were evaluated during this audit. Auditors interviewed Spectra's employees because they were designated to carry out the responsibilities on behalf of M&NP pursuant to the O&M Agreement. To accurately reflect the operation, the audit evaluated the implementation of the programs by the Operator in each of the audit evaluation tables appended to this Audit Report, and determined compliance status accordingly. As such, findings of "non-compliant" by this audit constitute an assessment of the Operator's implementation of the programs. The Board holds M&NP, as the certificate holder, accountable for the provision of oversight, and confirming the development and implementation of corrective actions to address all findings of "non-compliant."

M&NP, as the certificate holder, is ultimately accountable for verifying that the programs meet regulatory requirements. The Board holds M&NP accountable to provide oversight to confirm that the programs implemented are effective in meeting its regulatory requirements. To accurately capture the role of the certificate holder, M&NP is evaluated against the expectations outlined in Element 5.1 - Management Review.

**Audit Activities, Locations and Dates**

- Audit Notification Letter – 18 March 2010
- Audit Opening Meeting (Saint John, NB) – 29 April 2010
- Document and Records Review (Calgary, AB) – 1 June to 5 July 2010
- Head Office Interviews (Waltham, MA) – 6 to 7 July 2010
- Field Verification of All Programs:
 - Halifax, NS – 8 July 2010
 - New Glasgow, NS – 8 to 9 July 2010
 - Fredericton, NB – 13 to 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



M&NP Audit Findings Table					
I - Integrity	II- Safety	III- Environment	IV-Emergency Management	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, Risk Assessment and Control					
Compliant	Compliant	Compliant (rec)	Non-Compliant	Compliant	Compliant (rec)
2.2 Legal Requirements					
Compliant	Non-Compliant	Non-Compliant	Compliant	Non-Compliant	Non-Compliant
2.3 Goals, Objectives and Targets					
Compliant	Compliant (rec)	Compliant (rec)	Compliant	Compliant	Compliant
3.0 IMPLEMENTATION					
3.1 Organizational Structure, Roles and Responsibilities					
Compliant	Compliant	Non-Compliant	Compliant	Compliant (rec)	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 (rec)	Compliant (rec)	Compliant (rec)
3.5 Documentation and Document Control					
Non-Compliant	Compliant (rec)	Non-Compliant	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	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	Compliant (rec)	Non-Compliant	Compliant	Non-Compliant	Non-Compliant
5.0 MANAGEMENT REVIEW					
5.1 Management Review					
Non-Compliant					

Compliant (rec): Compliant with Recommendation

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 the audit evaluation tables appended to this Audit Report. Element 5.1 Management Review was assessed for M&NP independent of the disciplines and is presented in a separate table also appended to this Audit Report (Appendix VII). A summary of the results is presented below.



6.1 Integrity Management Program

Although review of the Integrity Management Program (IMP) activities indicates that it has benefited from the formal adoption of Annex N of CSA Z662-07, the Operator could not demonstrate that it has a process to identify and revise changes to documentation where failure to make immediate changes may result in negative consequences. Also, the Operator should modify its internal audit process to reflect the recommendations made in the evaluation of Element 4.4 Internal Audit to remain in compliance in the long term.

For the details associated with the deficiency identified and an assessment of the overall IMP refer to Appendix I: M&NP Integrity Management Program Audit Evaluation Table.

6.2 Safety Program

The audit determined that M&NP's Operator is implementing a Safety Program. The findings and recommendations relate to formal planning and management requirements such as adequate and formal processes for identification of legal requirements, assurance of professional resources, development of management of change (MOC) processes, communication, development of compliant audit processes and formal oversight of the program by the certificate holder.

For the details associated with these deficiencies and an assessment of the system as a whole, refer to Appendix II: M&NP Safety Program Audit Evaluation Table.

6.3 Environmental Protection Program

M&NP and its Operator have developed an integrated Environment, Health and Safety (EHS) MS. Its commitment to environmental protection was evident during interviews in Head Office and in the field locations. Staff was very knowledgeable and intend on meeting this commitment.

In addition to the deficiencies noted above in Section 6.2 Safety Program, the following deficiencies were identified for the Environmental Protection Program (EPP):

- a lack of formalized environmental responsibilities and training requirements for the EHS Support Specialist and regional technical staff that implement the EPP;
- no formal document adopted to describe the environmental procedures for the operations and maintenance of the pipeline;
- inability to demonstrate that all controls had been developed to assure protection of the environment; and
- inability to demonstrate that the internal audits assessed the EPP for adequacy and that they were inclusive of all M&NP regulatory requirements.

Formalization of the EPP would help ensure M&NP develops all the appropriate operational controls and would assist M&NP in defining the appropriate roles and responsibilities for professional and technical staff.



For specific details related to these deficiencies and an assessment of the system as a whole refer to Appendix III: M&NP Environmental Protection Program Audit Evaluation Table.

6.4 Emergency Preparedness and Response Program

The audit verified that M&NP's management demonstrated commitment to and support of the Emergency Preparedness and Response (EPR) Program through a well-documented program, active means of internal and external communication, and regular exercises to confirm continuing suitability of the program.

The deficiencies included:

- not having appropriately implemented its process for identifying hazards and determining appropriate control measures for emergency response planning;
- not having a fully-developed and implemented MOC program; and
- lack 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.

For specific details related to these deficiencies and an assessment of the EPR program refer to Appendix IV: M&NP EPR Program Audit Evaluation Table.

6.5 Crossing Program

The Crossing Program is considered part of the operational and maintenance activities and is documented in the Operator's O&M Manual and EHS MS. It was verified that crossing activities have been included in the hazards identified and procedures implemented within the O&M Manual and EHS MS. Because the program is not a stand-alone program, but is integrated as part of the IMP and EHS MS, it is important that each element developed for these disciplines (integrity, safety and environment) has adequately integrated the PCR. It was noted in the assessment of the IMP and EHS MS that the PCR were not being appropriately addressed.

The deficiencies included:

- lack of a process to identify and integrate PCR requirements into its Crossing Program;
- lack of a formal MOC process;
- inability to demonstrate that it has inspected all facilities that were permitted on the Right-of-Way;
- inability to demonstrate that it has implemented its process for reporting unauthorized activity;
- no audit to confirm compliance with the PCR; and
- lack of a process to assess the Crossing Program for continuing suitability, adequacy and effectiveness.

For specific details related to these deficiencies and an assessment of the system as a whole refer to Appendix V: M&NP Crossing Program Audit Evaluation Table.



6.6 Public Awareness Program

The Operator's Public Awareness (PA) Program is documented in its PA Plan and is developed and executed within each of the regions (New Brunswick and Nova Scotia) by the regional Public Awareness, Emergency Preparedness and Lands Coordinators. Because knowledgeable staff manage the program, the appropriate hazards have been identified and are managed appropriately within each region. However, various elements of the PA Program were not fully and formally developed because there is no over-arching system that has incorporated the PCR.

The deficiencies included:

- lack of a process to identify and integrate PCR requirements into its Public Awareness Program;
- lack of a formal MOC process;
- inability to demonstrate that it has included training for PA activities in its Training Program to confirm its ongoing effectiveness;
- no audit to confirm compliance with the PCR; and
- lack of a process to assess the PA Program for continuing suitability, adequacy and effectiveness.

For specific details related to these deficiencies and an assessment of the system as a whole refer to Appendix VI: M&NP Public Awareness Program Audit Evaluation Table.

6.7 Management Review

M&NP is the certificate holder and therefore it was held to the expectations described in the Management Review. It is expected that the certificate holder demonstrate that it is providing informed direction based on its knowledge of the hazards, operational performance and requirements. In the case of the M&NP System, although it was noted that the Operator was conducting formal reviews for the IMP, EHS MS and EPR Programs, it could not be demonstrated that the Management Committee provided direction based on the results of these reviews. In addition, it could not be verified that there were any formal reviews being conducting of the Crossing or PA Programs. These two programs were being managed autonomously in each of the regions (NB and NS) by the Coordinators; there was no formal reporting or reviews being completed by senior management of these programs.

The audit also identified that the Management Committee is undertaking some of the required oversight expected by the Board, in that the Management Committee reviews and monitors operational activities including performance goals at annual meetings. However, it could not be demonstrated that the Management Committee is actively and formally confirming that the programs are suitable, adequate and effective in meeting its regulatory obligations as outlined in the scope of this audit.



For the details of the non-compliance indentified refer to Appendix VII: M&NP Management Review Audit Evaluation Table.

7.0 Conclusions

Except where noted, the operational programs of the M&NP system were functioning in compliance with regulatory expectations. While all Non-Compliant findings described in the appendices require corrective action plans and resolution, of particular note is the Non-Compliant findings described in Appendix VII, Management Review. It is the Board's view that formally-documented and active oversight and direction by the certificate holder is essential to the ongoing safe operation of the pipeline for which it is accountable. Adequate Management Review should lead M&NP to resolve other Non-Compliant findings noted in this report.

8.0 Abbreviations

ATV: All-terrain Vehicle

CAP: Corrective Action Plan

CLC: *Canada Labour Code*

COSHR: *Canada Occupational Health and Safety Regulations*

CP: Cathodic Protection

CSA: Canadian Standards Association

EHS: Environment Health and Safety

EHSC: Environment Health and Safety Committee

EM: Emergency Management

EMO: Emergency Measures Organization

EPASS: Environment Performance and Safety System

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

JHA: Job Hazard Assessment

JSA: Job Safety Analysis

LMS: Learning Management System

M&NP: Maritimes and Northeast Pipeline Management Ltd.

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 Part I and Part II*
PIOC: Pipeline Integrity Oversight Committee
PRS: Pressure Reducing Station
RoW: Right-of-Way
SAIL: System and Integrity Logging
SCC: Stress Corrosion Cracking
SET: Spectra Energy Transmission
SOP: Standard Operating Procedure
U.S.: United States of America

APPENDIX I
M&NP INTEGRITY 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 Clauses 10.2.2 and 10.14</p>
<p>Assessment:</p> <p>The Operator applies Maritimes and Northeast Pipeline’s (M&NP) Integrity Management Program (IMP) document, dated 31 March 2010 which includes Section 2: Corporate Policies, Objectives, and Organization. Subsection 2.1 contains a Policy and Objectives description of short term (1-4 year) 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 within the scope of the document. The IMP Policy is endorsed and approved by senior management. In addition, there is the Pipeline Integrity Oversight Committee (PIOC) with a mandate to administer the IMP for all Canadian regulated pipelines. PIOC committee members are comprised of 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); and Director, Technical Operations (Northeast Region).</p> <p>Based on documents reviewed and interviews conducted, the Operator was able to demonstrate that it has a policy which commits to continual improvement and is communicated throughout the organization.</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:

Section 8: Hazard Identification and Control of M&NP's IMP document, 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. M&NP has segmented its pipeline system into logical and logistical segments (valve to pressure reducing station (PRS) and PRS to end of line valve). This dynamic segmentation allows M&NP to calculate the risk values of individual segments and compare the overall risk of one segment to another. The hazards input into the program include: internal corrosion, external corrosion, stress corrosion cracking, manufacturing, construction, equipment, and weather-related and outside forces.

Section 8.3.2: Internal Corrosion of the IMP states that "All the natural gas pipeline systems operated by the Company are designed as dry gas systems and are monitored and maintained to prevent internal corrosion as described in the Company's procedures. Thus internal corrosion is not considered a viable threat to the Company pipeline system at the current time."

However, there was evidence based on in-line inspections (ILI) conducted in the past, that although the pipelines carry dry gas (5-7#/MMSCF) and are monitored for water and other potential corrodents, some pipelines had indications of internal anomalies. These pipelines included: Saint John PRS to Irving Refinery and the Saint John rural laterals, Point Tupper Lateral and the Moncton Lateral. Potentially, the most serious of these anomalies was in the Point Tupper Lateral with an ILI vendor call of 30% internal metal loss that was subsequently excavated and determined to be 23% internal metal loss. The Pipe and Coating Inspection Report (Form 7T-33AW dated 05/20/2009) indicated that "The anomaly assessed was an internal factory/manufacturer metal loss defect" and that moisture and the presence of corrodents was not a contributing factor to the internal corrosion identified. Regardless, M&NP assessed the anomaly using Modified B31G, Effective Area Method and the B31G method to determine the safe operating pressure as compared to the actual

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.

In addition, the *RiskAnalyst* software produced internal corrosion output values that varied from 0.09 on the Moncton Lateral to 1.68 on Line 10 (Mainline). These values are on a scale of 1 to 10. Initially, these values were of concern as they represent a likelihood of failure due to internal corrosion. Upon examination of the Dynamic Risk Assessment Systems, Inc. algorithm in the IMP Section 2.4 Internal Corrosion, it was determined that the output values are a summary of all segments and of all algorithm outputs. While a detailed breakdown of individual segment and algorithm output values was not obtained, interviewees indicated that the scores resulted primarily from the Mitigation Multiplication Factor which uses the elapsed time since the last ILI, hydrostatic test or Internal Corrosion Direct Assessment. Thus, the numbers resulting from the software do not strictly represent a mechanistic probability of internal corrosion due to the presence of free water, acid gas (carbon dioxide/hydrogen sulfide) or microbiologically influenced corrosion. With respect to the software internal corrosion values that had a maximum of 1.68, this value is in the lower region of the corporate risk assessment matrix (Section 9: Risk Assessment, Figure 4: Risk Matrix) which has values bounded by 0.00 to 1.99. Thus the Operator considers the risk due to internal corrosion to be minimal.

The 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 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 document, 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 and mitigated.

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.

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, 40 and 41(1)
CSA Z662-07 Clause 10.14

Assessment:

The M&NP Operations and Maintenance Specifications Manual (O&MSM), Section 00 Forward, recognizes the applicable pipeline codes and regulations (including the Canadian and US codes). The M&NP IMP document, 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 National Energy Board, voluntary adoption of its Guidelines for Integrity Management Programs provides a comprehensive framework for the M&NP IMP. The Operator has SOPs which describe in detail its IMP. The SOPs are being revised against all its applicable regulatory requirements and best practices.

Based on documents reviewed and interviews with staff, the Operator was able to demonstrate that it had identified its legal requirements and had integrated its regulatory obligations into the IMP.

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-99 sections 40, 47 and 48
CSA Z662-07 Clauses 10.2.2(h)(ii) and 10.14.1

Assessment:

The IMP, Section 2: Corporate Policies, Objectives and Organization, 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 year) 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 M&NP’s Performance Plan which determines if the objectives

of the IMP are being achieved and if pipeline integrity is being improved. Through collection and analysis of performance data collected semi-annually, the Operator can demonstrate that the IMP is being executed as planned. Performance Reports from 2006 to 2009 inclusive were 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:

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

The O&MSM, Section 00, Reference 05 also outlines the organizational structure of overall pipeline operation including management, field personnel and field staff and establishes the reporting relationship of all levels of staff, and the inter-relationship of all work functions.

Twelve organization charts were provided that delineated the organizational 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
<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.
<p>References:</p> <p>OPR-99 section 6 CSA Z662-07 Clause 10.2.2(g)</p>
<p>Assessment:</p> <p>The IMP manual, 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 Operator’s 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 inter-relationship between those roles and responsibilities.</p> <p>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, Section N.8.1. While CSA Z662-07 Clause 10.2.2 (g) requires a (generic) MOC process, the Operator has voluntarily incorporated CSA Z662-07 Annex N, Sections 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.</p> <p>Based on documents reviewed and interviews conducted, the Operator was able to demonstrate that it has an effective MOC process to identify, document and analyze changes that could affect the IMP.</p>
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:

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 than annually.

Training and qualifications for Critical Service Providers includes Operator staff, vendors and contractors. These training requirements include: 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 tapping 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. Among these designations are: 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.

The Operator's management who are 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 ensures that the effectiveness of the training program and the objectives and expectations of the training program are being achieved. Documents and records of the completed training program for all staff are maintained in the local area offices.

Based on documents reviewed and interviews, 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; and
- 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:

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; and 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, provides 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 the Operator's specifications.

Based on documents reviewed and interviews conducted, the Operator was able to demonstrate that it has effective communication to

inform all interested persons of activities related to its IMP.

Although there are several internal and external mechanisms in place for communicating integrity issues, the Operator could not demonstrate that there is a formalized and implemented 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.

The Operator was able to demonstrate that it has adequate communication processes regarding integrity related information. The Board recommends that information related to the integrity of the system be included in a 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
CSAZ662-07 Clauses 10.2.2(e) and (f), 10.3.1.1(d) and 10.14.1

Assessment:

The Operator has recognized pigging as a hazard in its O&MSM (Section 04: Cleaning, Testing and Purging, Reference 05: Pipeline Pigging – General) where it clearly 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.”

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.”

The site specific Cleaning Pig Procedure for the Halifax Lateral – Rural Section dated August 29, 2008 contains a detailed checklist procedure for launching and receiving pigs. The steps to be taken for receiving the pig are on pages 13 to 16 of this Pig Procedure. The labels given to some of the facilities (12” valving location, 2” pressure gauge access valves) referenced in the procedure are not accurately identified on the schematic. Also, the Nova Scotia Halifax Lateral schematic reviewed (PLDM&NCAN05.0) did not align with the rural pigging facilities (B-0708-4C) as built. A site tour of the Halifax rural receiver and urban launcher confirmed that the pigging facilities as constructed do not match the existing schematics. The type and location of these facilities could have significant impact on the procedures and ultimately the safety of operators performing the procedures, thereby necessitating accurate and current schematics.

The Draft Audit Report referred to “P&IDs (process and instrumentation drawings). In response to the Draft Audit Report, M&NP clarified that P&IDs are the original construction documents and thus may not be consistent with the current facility schematics and field labels. However, Board staff were in fact reviewing the PLDs that M&NP indicated are the official operating drawings. The nomenclature used was not the reason behind the finding of Non-Compliant with respect to this Element.

During the site tour, operations and maintenance personnel demonstrated a clear and complete understanding of the required receiving procedures, including: bringing the pig into the oversized barrel, ensuring that the pig’s location was in the oversized barrel versus the standard 12” piping using a compass which reacts to the magnetic pig tracking insert, isolating and blowing down the standard size (12”) upstream piping, switching analog pressure gauges to digital gauges to be able to detect very low pressures, removing the digital gauge and probing the gauge valve for obstructions to ensure full depressurization and finally opening the receiver door to extract the pig. However, these details are only reflected by one step in the written procedure as “Verify zero pressure in Receiver barrel on both sides of the pig (prior to opening the closure door).” Given the inherent hazards associated with receiving the pig, and the specific procedural details tailored to the unique piping and valving arrangements that may exist at each receiver, site specific written procedures are required. Relying only on “on-the-job training” is not sufficient to ensure adequate and effective training and competency of inexperienced personnel.

Review of the Pigging Training PowerPoint presentation provided (7/7/2010) (slides 51 to 58) illustrates the general pig receiving procedure. Every schematic contained in the presentation shows a pressure equalization line between the upstream inlet line and the oversized pig barrel. Although this is a desired facility design feature and is shown on the schematics in the employee training materials, the Halifax rural pig receiver does not include any such pressure equalization line. As well as the fact that employees are being trained on a procedure that relates to an equalization line that doesn’t currently exist, the absence of such a line increases the need for and importance of detailed procedures, such as indicated by the operations personnel during interviews, to absolutely ensure zero pressure on both sides of the pig.

Currently, pipeline pigging has been limited to initial cleaning runs and actual ILI pigging. In the future, as a result of the internal corrosion program to be implemented in 2011, more frequent pigging will be required on all mainlines and laterals. 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 risk associated with pipeline pigging.

The Operator could not demonstrate that it has a process to identify and revise changes to documentation where failure to make immediate changes may result in negative consequences.

Compliance Status: Non-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 4, 27, 36, 37, 39 and 40
CSA Z662-07 Clause 10

Assessment:

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 along the boundaries of pipeline stations with critical contact information.

The IMP includes 15 Sections and 2 Appendices, and addresses the requirements of OPR-99 Section 27 which requires the development, regular review and updating of manuals to provide information and procedures to promote efficiency in the operation of the 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 conducted, the Operator was able to demonstrate that it has a process to address the risks and hazards associated with its facilities and activities.

<p>Compliance Status: Compliant</p>
<p>3.7 Operational Control-Upset or Abnormal Operating Conditions</p> <p>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 4, 32, 37, 40 and 52 CSA Z662-07 Clauses 10.2, 10.3.2 and 10.14</p>
<p>Assessment: 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 M&NP 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.</p> <p>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 for use in emergency repairs. Site visits confirmed the storage of pipe and fittings.</p> <p>IMP Section 14, Reference 02 covers emergency and planned pipeline shutdown requirements and References 03 to 06 inclusive provide pipeline schematics with mainline valve identification.</p> <p>Based on documents reviewed and interviews conducted, the Operator was able to demonstrate that it has plans for upset or abnormal operating conditions. For more information related to the Operator’s Emergency Preparedness and Response (EPR) Plan as it relates to the requirements of OPR-99 please refer to Appendix IV: M&NP EPR Program Audit Evaluation Table.</p>
<p>Compliance Status: Compliant</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 4, 27, 28, 36, 37, 39, 47, 48, 53(1) and 54(1)
CSA Z662-07 Clauses 9 and 10

Assessment:

The Operator's IMP, Section 13: Inspection, Testing, Patrols and Monitoring outlines its 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 SOPs. The SOPs have been "harmonized" to ensure the requirements for the U.S. and Canadian regulators are specified in terms of specific tasks and the frequencies of those tasks. The SOPs have been organized to address threat-specific requirements. For example, IMP Section 1.6: Inspection and Damage Prevention contains ten (10) procedures covering pipeline 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 Operator's 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 the Operator has 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 conducted, 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 preventive actions; and
- effectively implement the required corrective and/or preventive 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:

The IMP, Section 7: Incident Investigations, details its requirements for incident reporting, on-site investigation, follow-up investigation and inclusions of any recommendations to the IMP that would reduce the likelihood of a recurrence of such an incident. Section 2.3.2: Performance Measures includes threatspecific incident data that would constitute non-compliances. The data is collected, monitored, reviewed and investigated by the PIOC on a semi-annual basis. An internal report is presented and reviewed by senior management as well as the integrity management staff of M&NP. While no incidents had occurred that required action for the Operator, 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. Although not an incident as per the NEB definition, the 2009 meeting recognized an inconsistency with respect to the O&M Manual criteria for cathodic protection versus the criteria of CGA OCC-1 and NACE International. This issue was addressed and resolved.

Based on documents reviewed and interviews conducted, the Operator was able to demonstrate that it has a process to investigate 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:

The IMP, Section 4: Integrity Management Program Records, summarizes the Operator's 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 the 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; and
- Other records covering implementation and completion of risk mitigation activities.

An example of a record 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 CP potential measurements and sign off by the technician.

Based on documents reviewed and interviews conducted, the Operator was able to demonstrate that it has a records management program to ensure records are retained, accessible and maintained.

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 4, 53 and 55
 CSA Z662-07 Clauses 10.2.2(c) and (h)(iii)

<p>Assessment: The IMP, Section 15: IMP Review & Evaluation, Subsection 15.4 Audits, specifies that it will utilize both internal and external audits to formally validate and improve its IMP. While CSA Z662-07 Annex N is not specifically a requirement of the National Energy Board, the Operator has chosen to 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. An external audit had been commissioned in 2007 by CC Technologies Canada, Ltd. which included in its scope Operations and Maintenance, Emergency Preparedness and Response, Environment, Health and Safety Program, Security Management Program, Training Program, Pipeline Integrity and the Safety and Loss Management System.</p> <p>The Operator has also committed to performing internal audits of its IMP on an annual basis as per Section 15.4.2.1 of the IMP document.</p> <p>Based on documents reviewed and interviews conducted, the Operator was able to demonstrate that it has a process to undertake audits of its IMP.</p>
<p>Compliance Status: Compliant</p>
<p>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.</p>
<p>References: OPR-99 sections 4, 40 and 55 CSA Z662-07 Clauses 10.2.2 (h)(iii) and 10.14.1</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 II
M&NP SAFETY PROGRAM AUDIT EVALUATION TABLE

1.0 POLICY AND COMMITMENT

1.1 Policy and Commitment Statements

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.

References:¹

OPR-99 sections 4 and 7

CSA Z662-07 Clause 10.2.2

CLC Part II 125(1)(d)(i)-(ii), 125(1)(z.09)

Assessment:

M&NP has endorsed its Operator's Environment, Health and Safety (EHS) policy, EHS Management System (MS), performance standards and safety action plan which outline its commitment to ensuring safety for personnel and the public.

The EHS policy includes the following principles:

- Accountability;
- Stewardship;
- Standards;
- Performance; and
- Communication.

The EHS MS describes how employees and contractors are expected to meet the desired level of EHS performance for the following elements:

1. Roles, responsibilities and accountabilities;
2. Risk management;
3. Emergency Preparedness & Response;

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.

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; and
9. Assessment and management system review.

Based on interviews and documents reviewed, the Board verified that M&NP has formally endorsed its Operator’s EHS MS and that the commitment to managing its safety hazards and risks is demonstrated 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 Operations and Maintenance (O&M) Agreement between M&NP and its Operator, the Operator is implementing and maintaining the EHS MS.

The Operator incorporates a Risk Inventory and Job Safety Analysis (JSA) to assess EHS risk. The risk inventory method involves discussions with EHS, Operations, Maintenance, and other site personnel around specific scenarios. For each risk scenario, the team

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

discusses how workers could be injured or the environment damaged and then they discuss and evaluate the adequacy of existing controls. The JSA method integrates risk assessment and risk control to a particular task completed in order to identify appropriate roles at specific locations. The Operator documents hazards using Job Hazard Assessments (JHA); Hazard Identification and Reporting forms and Job Observation Checklists.

The Operator conducts risk assessment workshops annually to ensure the ongoing validity of identified risks and the possible identification of new ones. Prior to the workshop, EHS personnel obtain input from across the organization by interviewing a broad range of staff. This feedback is used as the basis for the workshop. These assessment workshops are designed to establish a forum/avenue to identify and evaluate EHS risks.

Another element of the EHS program involves a contractor health and safety management performance standard. It provides guidance for the registration, selection and oversight of all contractors performing work on the M&NP system and facilities. Implementation of the program ensures contractor safety expectations are met and risks are successfully managed. The contractor develops its H&S work plans prior to the start of work. Management conducts a review to ensure adequate internal and external oversight controls are part of the project review.

The Operator was able to demonstrate that EHS hazard identification, risk assessments and controls are being conducted throughout the organization and integrated into the appropriate aspects of the operation.

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 M&NP 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 of 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. Additionally, the Operator's Canadian EHS staff monitors Canadian Occupational Health and Safety (OHS) legislation and industry best practices with respect to any recent changes that are relevant to operations.

Regardless of the development and intent of the processes described above, the Operator was unable 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.

As part of its comments on the Draft Audit Report, M&NP indicated that the Manager, Regulatory Affairs 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 Manager, Regulatory Affairs forwards this information within the company as deemed appropriate. Safety compliance issues and identified gaps are tracked within the appropriate management team (lead by the Area Manager for operations related issues and the Project Manager for capital project related issues) as well as by the EHS Department.

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.

Assessment:

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

The Operator has a system in place to identify EHS goals and integrate them into action plans for corporate and individual assessments. Action plans and objectives are set out by the Vice Presidents of the various divisions participating in the Operations Committee, EHS Committee, as well as regional management and staff personal safety action plans. These committees provide reports and updates to senior management to provide a clear picture of the work of the committees in relation to the established goals.

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

The audit 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 M&NP operations in Canada. Particularly, it was noted that the goals focussed on broader regional issues such as compression which is more relevant to the Northeastern (NE) United States (U.S.) facilities where the majority of this region's activities are located. Presently there are no compression facilities in Canada; therefore, the goals do not fully reflect the NEB facilities and related activities.

Although the Operator was able to demonstrate that it has set objectives and targets relevant to its hazards and risks associated with the company's facilities and activities and has integrated them into individual and corporate performance measures, the Board recommends that these goals and targets be reviewed to verify their suitability to the Canadian operational 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 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:

The Operator has established an EHS Management Team with specific accountability for EHS related issues and programs.

Overall accountability for EHS issues is maintained by the EHS Committee (EHSC) which is comprised of senior personnel. The EHSC provides regular updates to the Board of Directors.

Lines of reporting for EHS issues within the Operator's management structure are clearly outlined, and include reporting routes from the Vice President, Operations Northeast (NE) Transmission; Manager, NE-Health & Safety and EHS Support Specialist. The other line of reporting includes the Director EHS, Houston. The Board reviewed copies of employee job descriptions to confirm that specific EHS responsibilities and accountabilities are identified.

The Operator was able to demonstrate that it has an organizational structure that allows it to effectively manage its internal EHS MS.

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)
CLC Part II 125(1)(z.05)-(z.06)
COSHR 19.5(4), 19.6(2)

Assessment:

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

The Operator was in the process of implementing the EHS MS Management of Change Performance Standard 2.7. This standard includes a process for identifying, assessing and implementing approved procedural changes. There are also MOC related initiatives in progress such the process to review all SOPs for the Operator against all US and Canadian regulatory requirements and best practices. EHS is leading the process with support of senior management, and regional subject matter experts.

At the time of the audit, the Operator did not provide evidence to demonstrate a fully-implemented MOC program that identifies documents and analyzes 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 requirements.

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

Assessment:

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

The Operator has a safety training matrix for employees assigned to operating and maintaining the M&NP pipeline. This matrix consists of a list of core safety training courses and the frequency for renewal. Employees are provided with notice and reminded of any updates to this matrix should additional training requirements be identified or should the existing curricula change. Also, some of the EHS training is offered online. The Human Resources Orientation Checklist includes all relevant EHS courses and managers are required to sign-off. Document review confirmed that training for the technical staff is being managed. Hard copies of training records are maintained by the administrator in the regional offices and electronic versions are managed at an offsite location (Houston, TX). Managers and employees receive electronic notifications when select training is due to be renewed. There is an annual evaluation on overall performance and the records are maintained by administrative staff.

The Operator was able to demonstrate that it has an adequate and effective safety training program for staff.

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; and
- to communicate the program's roles and responsibilities to interested persons.

References:

OPR-99 sections 18, 28, 29 and 47
CSA Z662-07 Clause 10.2.2(d)

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 M&NP and its Operator, the Operator is implementing and maintaining the EHS MS.

The Operator was able to demonstrate that it uses various methods for communicating safety requirements with its internal and external stakeholders. Currently, it communicates EHS requirements and issues with staff in the following ways:

- Safety Stand Down Meetings;
- Quarterly Employee Meetings and Safety Updates;
- Daily tailgate meetings;
- Daily and weekly safety reports;
- Northeast Region Health and Safety Newsletters;
- Monthly Safety & Communications Meetings; and
- Monthly reporting to EHS Corporate group.

Despite the many communication avenues, the Operator did not demonstrate that a formalized communication plan existed within the organization that identifies interested parties and pertinent information required to be communicated.

Although 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 key information in a timely fashion or by an established and ongoing process. The informal nature of the communication mechanisms does not allow for the demonstration of ongoing adequacy of the communication taking place within the organization.

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 in accordance with Board expectations.

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) and (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 M&NP and its Operator, the Operator is implementing and maintaining the EHS MS.

The Operator manages safety related documents in the regional offices. The audit confirmed that there is a comprehensive document management system in place, which includes processes to control and transmittal tracking of all safety program related documents. Review of the document control process showed that the system is undergoing continual improvement including monitoring, evaluation and updating of program documents when required. The Operator was able to demonstrate that it has adequate documentation control procedures in place to ensure the EHS MS provides the appropriate level of guidance to employees.

However, during the document review, the Board identified version control issues with selected safety program documents. For example, CSA Z662-03 was referenced in procedures throughout the Operations and Maintenance Manual. That is not the most current version of that standard. However, 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.

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. Due to the issue of outdated CSA references, the Board recommends that the Operator update the Operations and Maintenance Manual to reflect the current version of the 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.

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 M&NP and its Operator, the Operator is implementing and maintaining the EHS MS.

During the audit, it was confirmed that the risk assessment and Job Hazard Assessment include various mitigating measures to ensure operational control is maintained. The Operator uses these mitigating measures to form the basis of the operational procedures. Spectra is working on a SOP Harmonization Project which is in a transition phase. The SOP Harmonization Project is for Spectra Energy Transmission's U.S. Operations and Spectra's Canadian Operations in the Maritimes.

At the time of the audit, the Health and Safety Standards Manual contained procedures for tasks typically encountered by personnel and includes the Personal Protective Equipment requirements. The procedures reference and acknowledge compliance with applicable legislation and with industry best practices where applicable.

An Operations Control Table of risks and hazards is being developed to provide consistency across the business units. Once developed, the table will be used in conjunction with the EHS Risk Registry Guide which provides a centralized summary of risk scenarios for review by Business Unit Leadership. This summary is applied when setting priorities and allocating resources to adequately manage the EHS element of operational risk.

The Operator was able to demonstrate that there is a process to 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 consequences 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:

As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining the EHS MS which encompasses the procedures for addressing upset conditions.

The Operator has developed and implemented an emergency preparedness and response plan which includes safety issues. Interviews and document review verified that personnel safety issues are identified and incorporated into emergency procedures such as the evacuation procedures. Emergency evacuation drills and mock exercises are held on a regular basis. Safety issues are identified and incorporated into the exercises and review and learn discussions for incorporation into the procedures as part of the continual improvement of the program. For more details on the Emergency Preparedness and Response (EPR) Plan as it relates to the expectations of OPR-99, see Appendix IV: M&NP 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 M&NP and its Operator, the Operator is implementing and maintaining the EHS MS.

Document review and staff interviews confirmed that the Operator conducts several activities for the purpose of measuring and monitoring the implementation of the EHS MS. Safety issues are discussed and tracked in: the development and review of daily and monthly progress reports; daily and weekly safety inspection reports; daily tool box meetings; weekly all staff meetings; weekly behavior based inspections; incident reporting and review; incident investigations; fire drills; and contractor inspection reports. Incidents without loss, as well as actual incidents, are reported in the Incident Learning and Prevention system (ILP) which is part of the EPASS system.

The Operator was able to demonstrate adequate development and implementation of the measuring and monitoring activities for its EHS MS.

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

Expectations: The company shall have a process to investigate incidents or any non-compliances 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 preventive actions; and
- effectively implement the required corrective and/or preventive 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 Clauses 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 M&NP and its Operator, the Operator is implementing and maintaining the EHS MS. In the case of incident investigation, the Operator has a documented and comprehensive process in place which includes provisions for the reporting and investigation of incidents. In addition, the incident reporting and investigation process includes a review of significant safety related near misses as well as provisions for the review of contractors in incident investigations, when appropriate. The investigation process is designed to identify root causes and trends that will lead to corrective and preventive action. Staff analyzes incidents to detect patterns or trends to anticipate and prevent future incidents. The Operator uses the EPASS and Incident Without Loss (IWOL) System to track actions until they are completed and their effectiveness is verified. Safety lessons learned are documented and communicated to staff during the review and learns. Document review confirmed that the Operator documents and reports incidents and accidents in accordance with its reporting policy. The Operator was able to demonstrate that it has adequate processes to ensure incidents are investigated and the appropriate measures are taken to correct or prevent further deficiencies in its 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 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 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)

Assessment:

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

Operator's safety program generates records including: daily and monthly progress reports; daily and weekly safety inspection reports; daily tool box meetings; weekly all staff meetings; weekly behavior based inspections; incident reporting and review; incident investigations; fire drills; and contractor inspection reports. The Operator uses EPASS for management and storage of all operational data and incidents with no time loss. Incidents are reported in the ILP System which is part of the EPASS system.

Board auditors confirmed that the Operator has a records retention process which includes types of safety related records to be retained, retention timeframe and disposal methods.

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 Clauses 10.2.2(c) and (h)(iii)
COSHR 19.7(1)(2)

Assessment:

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

The Operator's internal EHS program audits are conducted by EHS Audit Manger, Audit Services. The audit planning cycle is determined by a comprehensive risk assessment. The Board reviewed the 28 September 2009 EHS MS audit and protocols 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 action 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.

As previously noted in Element 2.2 of this report, the Operator could not demonstrate that it has a process to identify and integrate Canadian Occupational Health and Safety legislation into its Safety Program as required by NEB regulations and the CLC Part II.

It was verified through interviews and document review that the Operator has an internal audit program to assess its EHS MS against its regulatory requirements. However, the Board notes that the absence of an effective process to identify and integrate all of the legal operational safety requirements could lead to incomplete EHS audit protocols and inaccurate internal audit findings.

Compliance Status: Compliant with Recommendation

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:

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)

Assessment:

See Appendix VII for the assessment of this element.

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

APPENDIX III
M&NP 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>As part of an Operations and Maintenance (O&M) Agreement between M&NP and its Operator, the Operator is implementing and maintaining the Environment, Health and Safety (EHS) Management System (MS). As part of the EHS MS, the Operator's Environmental Protection Program (EPP) policy and charter documents provide adequate direction and outline commitment to environmental protection.</p> <p>The Board noted that this policy was available at all workplaces and on the corporate intranet site. Signed off by Management, the policy was communicated to employees and integrated into operational documents. Interviews confirmed that the policy was understood by employees.</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</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

(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 48
CSA Z662-07 Clause 10.2

Assessment:

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

Document review and staff interviews established that the Operator is aware of the majority of the environmental hazards and aspects which could be associated with these facilities. Mitigation measures associated with those risks were also documented in procedures and understood by staff. As well, the Operator indicated that its measurement and monitoring activities (inspections and aerial patrols) provide an additional method of identifying environmental hazards and aspects. The final two practices are formalized within the Operator's Safety Evaluation Process and are applied to all EHS processes.

Presently, the Operator relies on the risk mitigation that was developed for the project application and construction activities as opposed to a formal hazard identification process for the associated risks that could be present in the operations phase. For ongoing hazard identification, the Operator identified that it relies on its staff to detect environmental hazards and aspects during pre-job and contract development processes.

In order for a hazard identification process to be compliant, the continual monitoring of environmental hazards must include a formal process to ensure adequate identification and mitigation for the operation stage. 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 table, 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.

The lack of a formal and ongoing process for identifying hazards hampers the implementation of standardized effective mitigation measures system wide.

Given the age of the facilities, the present processes for identification of environment hazards are adequate and use of information developed during the application and construction processes is a prudent practice. However, the incorporation of the application information should be formally validated in a procedure to promote ongoing effectiveness.

Although the list of hazards used is still applicable to the M&NP facilities, by continuing the present hazard identification method and

given the regulatory requirement for a formal process, the Operator risks not being in compliance in the future. The Board recommends that the Operator introduce a process to identify and manage its ongoing environmental hazards and aspects for its operations and maintenance activities.

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 M&NP and its Operator, the Operator is implementing and maintaining the EHS MS.

The Operator was unable to demonstrate that a process was in place to ensure the on-going monitoring of legal requirements on behalf of the certificate holder. The Operator indicated that its internal audit program develops a legal list which incorporates all legal requirements on an on-going basis. The Board's auditors were provided with documentation indicating that the Operator's internal audit group in Houston develops lists of legal requirements to populate the internal audit protocols. To develop these lists, they conduct interviews with auditee groups and staff who participate in professional and industry associations and monitor legal update services. The Board's auditors reviewed the lists and protocols that the Operator provided for the evaluation of legal requirements on other NEB-regulated facilities. Examination of these documents indicated that they were not exhaustive of all required legislation and some applicable regulatory requirements were not included.

The Board's audit did not include a formal evaluation of compliance against each of the missing legislation; however, the Operator could not demonstrate that it has a formal process to reliably identify and incorporate all the legal requirements into its Environmental Protection Program (EPP) as required in this element.

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 M&NP and its Operator, the Operator is implementing and maintaining the EHS MS.

The Operator's EHS policy contains broad goals and objectives for its EHS MS. Company environmental objectives are discussed 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. The Operations and EHS Committees, which consist of Vice Presidents of the various divisions, establish the goals and targets. The committees provide reports/updates to the Operator's senior management. Action plans and objectives related to the environment program are set out by the Operations Committee, EHS Committee and management, and are also incorporated into individual staff's personal safety action plans.

As part of the implementation of its 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 provided recognition in meeting their EHS performance objectives as part of the "Short Term Incentive Programs".

The audit identified that goals, objectives and targets, while managed appropriately, only meet the minimum requirements to be compliant and could be improved by addressing issues more relevant to NEB regulated operations. Particularly, it was noted that the goals focussed on broader regional issues such as compression which is more relevant to the Northeastern (NE) United States (U.S.) facilities where the majority of this region's activities are located. Presently there are no compression facilities in Canada; therefore, the goals do not fully reflect the NEB regulated facilities.

The Board recommends that these goals and targets be reviewed to verify their suitability to the Canadian operational requirements. In order to ensure ongoing compliance, the Board recommends that the Operator expand its goals, objectives and targets to better reflect regional differences.

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 M&NP and its Operator, the Operator is implementing and maintaining the EHS MS.

The Operator has established an EHS Management Team with specific accountability for the EHS program. Overall accountability for EHS issues is maintained by the EHS Committee (EHSC) which is comprised of senior personnel. The EHSC provides regular updates to the 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 examined. The lines of reporting for EHS issues are outlined, and include reporting routes from the Vice President, Operations NE Transmission; Manager, NE-Health & Safety; and EHS Support Specialist. The other line of reporting includes the Director EHS, Houston.

Board auditors reviewed job descriptions to confirm that specific EHS responsibilities and accountabilities had been identified and included. The EHS Support Specialist with assistance of the regional Lands, Emergency Planning and Public Awareness Coordinators (Coordinators) and the Operations Technicians are accountable for the implementation of environmental procedures and practices. Interviews with regional technical staff indicated that environmental roles and responsibilities were not fully and formally contained within the various job descriptions. At the time of the audit, the Operator was unable to provide a formal, up-to-date job description for the EHS Support Specialist that articulated the full scope of this position's responsibilities and authorities. However, interviews confirmed that, in practice, the responsibilities were well understood.

As well, interviews with regional staff established that the structure in practice was appropriate; however, it should be formalized and the various needs including training, reporting structure, etc. be more formally managed.

Board auditors noted that the expectations of the EHS Support Specialist appeared to be significant for one person to manage. For instance, the EHS management workload involved review and development of new practices and procedures as well as contract management and on-sight oversight activities. The unofficial duties undertaken by the Coordinators may be an indicator of the enormity of the responsibilities of the position. It is suggested that, while the effort and results demonstrated by the staff member were significant, the Board's findings with respect to the lack of formalization and proceduralization could have been mitigated with increased resourcing of this position.

Although the Operator was addressing the environment-related tasks, it could not demonstrate that it had defined environmental responsibilities for the EHS Support Specialist and regional technical staff as required. Furthermore, it is recommended that the Operator review the level of resourcing for EHS program oversight to ensure that environmental protection is suitable and 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 M&NP and its Operator, the Operator is implementing and maintaining the EHS MS.

The Operator is in the process of implementing a Management of Change (MOC) process which outlines the identification, assessment and implementation of changes once they have been approved by the appropriate responsible individuals according to the EHS MS MOC Performance Standard 2.7. As well, it was noted that there is a collaborative process to review all standard operating procedures against all applicable regulatory requirements and best practices. The EHS group is leading this process with support of senior management and regional subject matter experts.

However, at the time of the audit, the Operator did not demonstrate a fully implemented MOC procedure. The current process did not

include proactive formal identification of required changes and a formal analysis of the effects that the changes may require.

Although an MOC process exists as a Performance Standard, it was determined that the MOC process is only partially implemented as described in the standard by various corporate technical areas including Environment. As the regulations require the MOC to be implemented as designed, this element has been evaluated as Non-Compliant.

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 requirements.

References:

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

Assessment:

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

The Operator maintains records of all training required and completed by all workers in the regional offices. A review of the training matrix for employees assigned to operating and maintaining the M&NP pipeline includes environmental content. This matrix lists all core training courses and the frequency with which they are required. The Operator provides employees with any updates to this matrix when additional training requirements are identified or should existing curricula be changed. Document review confirmed that the Human Resources Orientation Checklist includes all relevant EHS courses and managers are required to sign-off.

Although the training matrix was applicable to many of the operations staff, review of the environmental training program and training requirements indicated that it was focused on frontline staff (Operations Technicians). Further examination concluded that the training

matrix did not include refreshment requirements for technically advanced staff with roles and responsibilities in the EHS program such as the Coordinators who are required to exhibit technical knowledge. In order to achieve compliance, senior level technical staff should be considered for training to promote the continual improvement of the program.

It was noted that there were no training or competency requirements for the professional staff (EHS Support Specialist). This omission was considered significant as the majority of the environmentally related activities are coordinated or undertaken in this position.

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; and
- 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 M&NP 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 environmental requirements with its internal and external stakeholders. Review of meeting notes indicated that environmental issues and requirements were communicated through: 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 & communication meetings; monthly reports to EHS Corporate group; contract management activities; pre-job meetings; intranet sites; etc.

However, the Operator could not demonstrate that it had developed and formalized a communication plan within the organization that

clearly identifies a method to ensure that all affected parties receive pertinent EHS information through formally adopted communication channels. Although 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 interested parties are receiving the necessary information in a timely fashion. The informal nature of the communication makes it difficult to demonstrate the ongoing adequacy of the communication efforts currently taking place within the organization.

The Board could not verify that a formalized communication plan exists within the organization that clearly identifies interested parties and pertinent environmental information that is required to be communicated in accordance with Board expectations.

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) and (f)

Assessment:

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

Documents related to the Environment Program are managed at the regional offices. During the audit, the Operator demonstrated that it has developed documentation which describes its management system initiatives. Document review confirmed that a comprehensive document management system is in place, which includes control and transmittal tracking of all documents. As well, there was evidence that the documents are undergoing periodic reviews and adjustments.

Board auditors noted that, the Operator is continuing to use the EPP developed to address hazards and aspects identified in the application phase for direction when undertaking environmental activities even though the pipeline has been in the operational phase for a decade. While the application-stage procedures may be adequate for protection of the environment during the operational phase,

these procedures have not been formally reviewed and deemed appropriate for operations. In order to ensure present and ongoing suitability and compliance of these EPP documents, the Operator should review and update these documents to reflect the risks, hazards and aspects of the operational phase where required.

A fully compliant and implemented document control process should have indentified the need to formally develop and manage these documents to ensure that they continue to be fit-for-purpose and incorporate all legal requirements beyond the application and construction phases.

Therefore, the Operator could not demonstrate that the EPP in place adequately addresses all the appropriate environmental aspects associated with the operation and maintenance of the pipeline system.

In its comments on the Draft Audit Report, M&NP noted that its EPP, filed as part of its original facility application, indicated that it would be used during the operation of its facilities. M&NP committed to submit future revisions to the EPP to the Board for approval. The Board notes that, without a fully-developed review and revision process for environmental programs, a company cannot demonstrate that it is anticipating, preventing, mitigating and managing conditions which have a potential to adversely affect the environment as required by section 48 of the *Onshore Pipeline Regulations, 1999* (OPR-99). While the Board recognizes M&NP's commitment, it does not expect submission and approval of EPPs on a routine basis. Further, M&NP should have developed an EPP for its operations which has been reviewed and, if necessary, revised.

Compliance Status: Non-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) and 10.3.1

Assessment:

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

Except where noted, the Operator, had developed and implemented controls for managing the legal requirements and environmental aspects and risks it had identified. Further, the Operator provided working documentation for the re-development of EHS management processes and procedures which included a formal EHS Operational Controls table. This table serves to document and manage issues which require control to minimize their effects.

As noted in Elements 2.1 and 2.2 above, the Operator has not demonstrated that it has fully compliant processes for identifying all of its legal requirements and environmental aspects and risks for its NEB regulated facilities. Therefore it could not demonstrate that it had identified all controls required to be developed to assure protection of the environment. As well, as noted in Document Control (Element 3.5) above, the Operator was utilizing outdated and unapproved or unreviewed procedures which may or may not be meeting the environmental protection requirements.

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.

Compliance Status: Non-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 consequences 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 Clauses 10.3.2 and 10.3.5

Assessment:

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

Due to the type 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;
- WHMIS managed products; and
- an unintended release of product into the atmosphere.

Control of these issues would consist of application of normal operating procedures and practices. Upset conditions would trigger the Emergency Response Plan. Therefore no specific evaluation of this issue is made within the EPP with the finding being consistent with Element 3.6.

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 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 M&NP and its Operator, the Operator is implementing and maintaining the EHS MS.

The Operator performs many activities to measure and monitor the implementation of the EHS MS. Environmental issues are discussed where required in the development and review of: daily and monthly progress reports; daily and weekly safety inspection reports; daily tool box meetings; weekly all staff meetings; weekly behavior based inspections; incident reporting and review; incident investigations; monthly right-of-way aerial patrols; annual full length right-of-way inspections; and within the Incident Without Loss system. The Operator was able to demonstrate development and implementation of the activities through the review of documentation and records provided, and during interviews with staff.

In addition, interviews and record review confirm that, as part of its post-construction activities, the Operator undertakes an additional review and evaluation of the environmental mitigation program applied during the construction of its facilities.

M&NP provided additional information through its comments on the Draft Audit Report indicating that any identified environmental issues are documented in the “Environmental Issues Report” or Aerial Patrol report form. M&NP also indicated that the requirement for a full right-of-way inspection is noted in the Operations and Maintenance Specification Manual Section 02 Reference 05.

Although M&NP commented that environmental **issues** are documented, the Board recommends that M&NP should also maintain a record for those inspections when no environmental issues were encountered. Without some sort of documentation, it is hard for M&NP to demonstrate and for Board auditors to verify that these inspections are taking place.

The Board recommends that M&NP maintain a record of its environmental inspection activities whether or not environmental issues are identified.

Compliance Status: Compliant with Recommendation

4.2 Corrective and Preventive Actions

Expectations: The company shall have a process to investigate incidents or any non-compliances 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 preventive actions; and
- effectively implement the required corrective and/or preventive 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)

<p>Assessment: As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining the EHS MS.</p> <p>Through document review and interviews, the Operator was able to demonstrate that it has adequate processes in place to identify, develop and implement corrective and preventive actions which arise from its management or incident investigation processes. The Operator was able to demonstrate through document and record review that it has developed and implemented appropriate incident management and investigation processes.</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 48 and 56 CSA Z662-07 Clause 10.2.2(e)</p>
<p>Assessment: As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining the EHS MS.</p> <p>Records relating to the EPP were retained in the regional offices. Document review confirmed that the Operator had record retention processes in place which include appropriate types of records to be retained, retention timeframes and disposal methods. All records requested were readily retrieved.</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</p>

out the audits. These audits shall be conducted on a regular basis.

References:

OPR-99 sections 53 and 55

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

Assessment:

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

The Operator has developed and implemented an internal audit program which evaluates its EPP against identified regulatory requirements and management system principles. The program includes a process for following-up and closing-out issues identified in the audits which are reported to senior management. Responsible managers and staff accountable are held responsible for ensuring action items are completed in a timely manner.

The review of the internal audit program indicated that, although the audit process was well documented and being appropriately managed, 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. The Board determined that the audit process relied on a self identification of requirements by the operating staff and management. This method does not incorporate an all inclusive review of the activities and regulatory requirements and could result in missing requirements that would then be unidentified and unmeasured.

The Operator could not demonstrate that all legal requirements for the EPP were appropriately defined and that the internal audits were inclusive of all applicable regulatory requirements. As the audit process was lacking formal and comprehensive identification and evaluation of M&NP's regulatory requirements, the framework on which the audits were based was flawed. Without a comprehensive protocol that incorporates all legal requirements, the internal audit may not reflect the true level of compliance with all of the regional requirements.

As part of its comments on the Draft Audit Report, M&NP indicated that the referenced audit is not considered an internal audit or self assessment performed by the Operator as these audits are performed by the Corporate Audit Services and are independent evaluations of EHS risks, the Board's auditors note that this process would not be considered independent or third party by commonly accepted audit practice. To be appropriately independent, auditors should not be part of the audited organization.

Compliance Status: Non-Compliant

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:

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
M&NP 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 CSA Z662-07 Clause 10.2.2</p>
<p>Assessment:</p> <p>M&NP’s Operator demonstrated that it has an Emergency Management (EM) policy in place that is well communicated throughout the company. Interviews conducted with Field Technicians, the District Manager and Lands and Public Awareness Coordinators (Coordinators) verified that all are well aware of the EM policy. They noted that the policy is reinforced at least annually and that management is open and accessible for direct feedback on policy matters from all levels of the company. The EM policy is contained within a document titled: <i>Maritimes and Northeast Pipeline Emergency Preparedness and Response Program</i> updated May 2010.</p> <p>Interviews with Field Technicians, the District Manager, the Area Manager and Coordinators verified that management is committed to and fully supports the Emergency Preparedness and Response (EPR) Program. Monthly safety meetings allow all staff to raise issues and provide management feedback, and upward feedback and involvement is encouraged. Feedback and action items are recorded at every meeting to ensure they are addressed and tracked. The Field Technicians are also very involved with the Standard Operating Procedure (SOP) harmonization project. Management has provided the budget to support the EPR Program including the cost of conducting exercises and purchasing new equipment as required. Personnel interviewed indicated that there has been no lack of budget support for the EM programs.</p> <p>Based on interviews and documents reviewed, the Board verified that the Operator has formally endorsed its EPR Policy and that the commitment to managing its hazards and risks is evident at all levels within the organization.</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.

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), 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 M&NP and its Operator, the Operator is implementing and maintaining the EPR Program.

In the design phase of each pipeline in the M&NP system, the Operator conducts thermal radiation simulations to determine the appropriate emergency planning zones (EPZs) for the pipeline. The EPR Program summarizes the EPZ for each pipeline in the M&NP system and the Emergency Response Plan (ERP) establishes response procedures for emergencies within the EPZs. On an annual basis, the Operator holds an EPR meeting of the Area Managers, District Managers and Coordinators for the purposes of reviewing EPR matters and for planning EPR activities. The EPZs form the basis for design of the ERP. A review of the existing hazards and appropriateness of the EPZs for each of the M&NP pipelines is on the agenda for this annual meeting. If any pipeline operating parameters change, the Operator recalculates the EPZ.

The Operator's personnel described the process for annual review of hazards and risks. Minutes of the annual meeting confirmed that a risk assessment was conducted in terms of operational changes and the potential changes to pipeline EPZs and training. The Operator described the Encana Deep Panuke project as an example. The Deep Panuke project would deliver sour gas to the Goldborough gas plant where it would be sweetened before transmission on the M&NP mainline. The potential exists for a process upset at Goldborough that would result in sour gas being released into the M&NP mainline. This hazard was assessed and it was determined that H₂S training

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

would be provided to appropriate technicians. Following the review of the minutes of the annual meeting, the Board could not confirm that there was a process in place to conduct a periodic review of existing hazards or to identify and incorporate new ones.

The *Environment Health and Safety (EHS) Management System (MS) Performance Standard 2.0 EHS Risk Management* sets out the procedure for identifying hazards, assessing hazards, determining levels of risk posed by the hazards and controls to mitigate the risks. The performance standard identifies a wide range of environment, health and safety hazards that could pose risks to people and environmental end points. An Operational Controls Table is used to maintain an inventory of this information according to activity, identified hazard, assessment of risk, reference to legal requirements and established controls.

Procedures were developed based on the requirements set out in Performance Standard 2.0 for assessing the primary hazards posed by the M&NP pipeline system, such as conducting thermal radiation simulations in order to determine the EPZs, and conducting an annual review of the hazards and risks. However, it could not be verified that these procedures met the intent of this Performance Standard in that all possible hazards to the public, responders, property and the environment had been identified, and that the level of risk posed by each hazard, the risk ranking and appropriate control measures for the purpose of emergency response planning had been determined.

It could not be demonstrated that the Operator has appropriately implemented its process for identifying 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:

As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining the EPR Program. The EPR Program includes a process to identify and integrate legal requirements. The applicable sections of the OPR-99 related to EM

are integrated into the EPR program. The Operator updates the ERP on an annual basis and files copies of the updates with the NEB in accordance with its document control procedures. The ERP identifies National Energy Board (NEB or the Board) incident reporting requirements in accordance with the OPR-99 requirements.

The Manager of Regulatory Affairs described the process that is in place to monitor regulatory changes. The governing legislation, regulations, standards, advisories and other applicable regulatory information is tracked, any changes or updates undergo strategic analysis to identify business impacts and required operational changes and then action plans are developed and implemented. All regulatory changes are captured and an annual summary of regulatory changes is broadly distributed throughout the company. Examples of changes being tracked are the proposed damage prevention regulations and the NEB pipeline abandonment initiatives.

Both M&NP and the Operator were able to demonstrate through interviews and documents reviewed that they had a process to identify and integrate legal requirements into the 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-99 sections 40, 47 and 48
CSA Z662-07 Clause 10.2.2(h)(ii)

Assessment:

The *EHS MS Performance Standard EHS Objectives Targets and Strategies 7.1* sets out the goals, objectives and targets relevant to the risks and hazards associated with the facilities and activities. It was verified that the Operator was in compliance with this element through the audits of the Environment and Safety Programs. For more information as it relates to this program element refer to Appendix II: M&NP Safety Program Audit Evaluation Table and Appendix III: M&NP Environmental Protection Program 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 Z662-07 Clauses 10.2.2(b), 10.3.2.4

Assessment:

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

Based on its organizational structure, the Operator has assigned company personnel roles and responsibilities within the program. The Operator tests the adequacy and effectiveness of EPR roles on an annual basis through full scale mock exercises and table top exercises. Interviews with the personnel verified understanding of roles and responsibilities. Review of related documentation confirmed that the Operator has the capability to respond to an emergency based on the training received by personnel, the results of exercises conducted and the training of mutual aid partners who participate in emergency response exercises.

The Operator was able to demonstrate that it has developed roles and responsibilities within its organizational structure to effectively implement 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 M&NP and its Operator, the Operator is implementing and maintaining the EPR Program.

The *EHS MS Management of Change Performance Standard 2.7* sets out the expectations of operating companies for management of change (MOC). For the EPR Program, the Operator reviews and updates its program on an annual basis, including an assessment of changes that may affect the program. Inputs are received from the results of emergency response exercises, continuing education and liaison programs, and any changes to operating conditions of the pipelines. Updating includes ongoing maintenance of the landowner database. Inputs to the landowner database include information received in response to the annual letter to all landowners along the M&NP system, GIS data from the provinces, data from the provincial Emergency Measures Organization (EMO), 2008 City of Halifax data, City of Saint John data and title searches as required. The landowner database is incorporated into the Emergency Response Mapping.

Despite the documented processes in place to monitor changes directly related to the EPR Program, the Board could not confirm that the Operator had a documented and implemented MOC program that encompassed all operational programs. An overarching MOC process is required to identify, evaluate and integrate changes such as the introduction of new risks, hazards or legal requirements outside the EPR Program itself that could affect its implementation.

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 M&NP and its Operator, the Operator is implementing and maintaining the EPR Program.

The *EHS MS Performance Standard 1.4 EHS Training* establishes minimum expectations to ensure that appropriate training is identified and employees are properly trained. It also ensures that all employees have received required training at the appropriate frequency and that the completed training is tracked.

The EPR Program identifies the training program for operations staff related to the field ERP. The training program sets out that training will encompass, at a minimum:

- 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 ERPs; and
- completion of any identified deficient training related to the use of response equipment.

The training will be complemented by:

- attendance at related conferences and workshops;
- incident command training;
- media relations; and
- crisis communication training.

Operator staff informs visitors to company maintenance sites of the practices and procedures to be followed. 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.

Interviews verified that all personnel who have an emergency response role receive appropriate levels of training for their respective roles in accordance with the *EHS MS 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 such as Incident Command System or Emergency Site Management, they receive training in company emergency response procedures, as well as plan and participate in several emergency response exercises per year, including at least six table top exercises and one full scale mock emergency exercise. Company personnel rotate through exercise roles such as incident commander, on-site supervisor, safety officer and liaison officer in order that training and response capability are maximized. 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 both the Nova Scotia and New Brunswick EMO. Upon completion of this training, company employees complete written examinations. 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 M&NP, the company is developing a field operator qualification procedure.

A field technician described the response taken to a cargo plane crash at the Halifax Airport, and credits the skills gained from company exercises with the success in dealing this real 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, pre-qualified contractors, the public, and other persons who may be involved in an emergency on the M&NP system 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 all of these groups, and that the forums and exercises are conducted several times per year according to a well planned and managed schedule. All participants sign-in to the exercises and participation is tracked. The most recent full scale mock exercise conducted by the Operator involved almost 70 participants.

Based on interviews and documents reviewed, the Operator demonstrated that personnel receive adequate training in emergency response.

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; and
- to communicate the program's roles and responsibilities to interested persons.

References:

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

CSA Z662-07 Clauses 10.2.2(d), 10.3.2.2, 10.3.2.3

Assessment:

As part of an O&M Agreement between M&NP 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 during an emergency on the M&NP pipeline. Document review verified the content of information 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 the mailing of annual information letters to all residents within the EPZs and, where requested, meetings with residents to discuss the information brochures; First Responder booklets; presentations to first responders, forestry operators, landowners and municipalities; video presentations; personal visits to landowners; and public awareness presentations. The Board also reviewed the Public Awareness binders where activities and schedules of engagement events are tracked.

Communications under the Operator's public relations and awareness program are targeted to:

- EPZ residents;
- Schools – including a natural gas education program;
- Fire departments, police, EMOs and emergency health service;
- Communities and interest groups;
- Forestry operators;
- Municipal, provincial and federal government; and
- Contractors.

The Operator also has a documented Public Awareness Plan to address the requirements of the Board's *Pipeline Crossing Regulations* and the respective section of the OPR-99. The Public Awareness Plan serves as a formal communication guide and schedule to educate the public and others of the responsibilities of working or living near the pipeline. The Public Awareness Program evaluation is Appendix VI of this report.

Accu-link call system is a 24-hour call system reached through a 1-800 number that is on the M&NP signs and website. The Accu-link centre will manage any call received by the Operator 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 Operator's 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 M&NP Right-of-Way (RoW). For any work proposed within 500 meters of the 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 worked well. 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.

Although there are several internal and external mechanisms in place for communicating EPR Program related information, the Operator could not demonstrate that there is a formalized and implemented 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.

The Operator was able to demonstrate that it has adequate communication processes regarding EPR Program information. The Board recommends that information related to the third party activities be included in a 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 27 and 32
CSA Z662-07 Clauses 10.2.2(e) and (f), 10.3.1.1(d)

Assessment:

As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining the EPR Program. The EPR Program Manual describes the elements of the EM program. The EPR Program Manual is reviewed and revised as necessary

through the annual management review process. Documents such as the ERP Manual 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 receive updates as required through the document control process. The provincial fire marshals and the Saint John Fire Department hold controlled copies of M&NP's ERP.

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 Field ERP sets out the company response procedures in the event of a pipeline emergency on the M&NP system in New Brunswick and Nova Scotia. The document is current to February 2007 and in accordance with the EPR Program, it undergoes management review on an annual basis. Review of the minutes of the annual meeting confirmed that the ERP is a standing agenda item for the annual 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 verified that all field vehicles and offices have updated copies of the ERP Manual. It is a living document that is controlled and used regularly for exercises and training.

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 M&NP and its Operator, the Operator is implementing and maintaining the EPR Program.

The 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 M&NP system. Through its continuing education, liaison and public awareness programs the Operator 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 consequences 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 M&NP and its Operator, the Operator is implementing and maintaining the EPR Program.

The Operator has an ERP in place for the operation of the M&NP pipeline systems in New Brunswick and Nova Scotia. The ERP includes appropriate roles, equipment, procedures, etc. for the hazards identified. The ERP Manual is updated annually, with version and distribution control processes applied and followed. The ERP Manual and any updates are filed with NEB.

The Operator conducts full scale mock and table top exercises on a scheduled basis to train company personnel and test first responders and contractors. The Operator regularly informs the public, agencies and first responders (fire departments, police and Emergency Health Services) 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 debriefing 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.

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

Assessment:

Surveillance and monitoring are documented under the Integrity Management Program (Appendix I), Safety Program (Appendix II), Environmental Protection Program (Appendix III), Crossings Program (appendix V) and Public Awareness Program (Appendix VI).

Compliance Status: N/A

4.2 Corrective and Preventive Actions

Expectations: The company shall have a process to investigate incidents or any non-compliances 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 preventive actions; and
- effectively implement the required corrective and/or preventive 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 Clauses 10.2.2(g) and (h)

Assessment:

As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining the EPR Program. The *EHS MS Incident Learning and Prevention Performance Standard 8.1* sets out the detailed incident investigation procedures. Document review confirmed that the Operator has standard guidelines for incident reporting that addresses the requirements of OPR-99 section 52. The ERP also includes a post incident evaluation process.

The Operator conducts several exercises per year including table top and full scale mock exercises. There is documentation that supports the planning and implementation phases of the exercises. However, documentation is absent that shows the feedback received from participants in the exercises, the lessons learned from the exercises and the actions put in place to address suggested improvements and for incorporating feedback into the EPR Program. There is no documentation demonstrating that the Operator tracks and verifies completion of the actions.

The Operator did not demonstrate that it has 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 and therefore does not have procedures in place to identify opportunities for improvement in its protection programs and procedures.

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 Clause 10.2.2(e)

Assessment:

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

all associated processes including the maintenance of records. Interviews and document review verified that all 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 web portal.

The Operator was able to demonstrate that it has a records management program for the EPR Program that meets requirements.

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 Clauses 10.2.2(c) and (h)(iii)

Assessment:

As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining the EPR Program. The *EHS MS Performance Standard 9.1- EHS Audits* sets out the expectations for an internal audit program. The Board verified that the program audits against the requirements of OPR-99 as it relates to EM.

The Operator was able to demonstrate that it has an audit program that includes the EPR Program.

Compliance Status: Compliant

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:

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
M&NP 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 CSA Z662-07 Clause 10.2.2</p>
<p>Assessment:</p> <p>As part of an Operations and Maintenance (O&M) Agreement between M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including activities related to third party activities near the M&NP system. During the audit, it was noted that the Operator’s crossing or third party activities are subsumed in the Operator’s O&M activities that are adequately addressed by the corporate safety policy.</p> <p>The Board also noted that the safety policy has been integrated by the Operator’s staff when working with third parties. During the interviews, Staff consistently emphasized their personal accountability for public and worker safety when they inspect or observe crossing-related activities. Technical staff described personal authority and obligation to intervene with third parties to ensure that the procedures were being adhered to during crossing activities.</p> <p>This element is more fully evaluated in Element 1.1 of Appendix II – M&NP Safety Program Audit Evaluation Table.</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 of these. Risk: Combination of the likelihood and consequence(s) of a specified hazardous event occurring

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 Clauses 10.2, 10.14

Assessment:

As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including activities related to third party excavation and construction activities near the M&NP system. By reviewing the hazard identification process, the Board noted that the Operator had identified the common crossing-related hazards for communication to its staff and the public. Common hazards for third parties are included in the third party information such as the Crossing Guidelines as well as within related internal procedures.

Additionally, document review showed that specific hazards related to crossing projects are addressed in pre-job safety meetings and noted in the pre-job checklist to identify and control the hazard associated with each crossing activity.

Further to these processes, operations field staff identified that it is routine practice to proactively identify and address potential crossing hazards where possible including communicating directly with third party workers near the rights of way. If staff observe unattended excavation equipment parked near the RoW, they will leave a brightly coloured note on the equipment to notify third party operators that there is a high pressure gas pipeline in the vicinity and to contact the company prior to beginning any excavation.

The Operator demonstrated that it has mechanisms in place to report and address hazards introduced by third parties working around pipelines.

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.

<p>References: OPR-99 sections 4 and 6 PCR Part II sections 4, 5(1) and 13(1)(a) CSA Z662-07 Clause 10.2.2(g)</p>
<p>Assessment: As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including activities related to third party excavation and construction activities near the M&NP system. During interviews, Operator staff stated the standard practice for analyzing legal requirements consisted of staff participation in industry groups such as CSA and Canadian Energy Pipelines Association as well as monitoring of regulatory updates posted on relevant government websites. The Operator did not demonstrate that it has a formal process for the tracking of legal requirements for the operation 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 did not have a process in place that recognized the requirement to file separate technical crossing guidelines for Board approval as required by the <i>National Energy Board Pipeline Crossing Regulations</i> (PRC) Part II. The Board notes that subsequent to the onsite portion of this audit, the guidelines were filed.</p> <p>The Operator could not demonstrate that it has a formal process to identify and integrate PCR requirements into its programs.</p>
<p>Compliance Status: Non-Compliant</p>
<p>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.</p>
<p>References: OPR-99 sections 47 and 48 CSA Z662-07 Clause 10.2.2(h)(ii)</p>
<p>Assessment: As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including activities related to third party excavation and construction activities near the M&NP system.</p>

As noted elsewhere, crossings and related activities are included in the overall operations and maintenance safety program. As such, the evaluation of the goals, targets and objectives for crossing activities such as locates were incorporated into the review of Element 2.3 of the Safety Program (Appendix II).

Review of the Safety Program identified that the Operator was able to demonstrate that it sets objectives and targets relevant to its hazards and risks and has integrated them into individual and corporate performance measures.

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 and 10.2.2(b)

Assessment:

As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including activities related to third party excavation and construction activities near the M&NP system.

A review of the organizational structure and interviews confirmed that, based on M&NP's present facilities and level of activity, it has an adequate structure in place with respect to its Crossing Program. Records review indicated that crossing-related responsibilities were incorporated in job descriptions across the organization where required.

M&NP facilities are located in Eastern Canada (Nova Scotia and New Brunswick). There is an Area Manager with responsibilities for both provinces and each province has field staff, a District Manager and a Lands, Emergency Preparedness and Public Awareness Coordinator.

Field technical staff that perform crossing-related duties such as locates and the supervision of third party crossings, etc. report to the provincial District Managers. The Operation Technicians are cross trained to address tasks involved in operating and maintaining the

pipeline as well as some crossing matters. For example, technical staff are onsite for all work being done within 5 metres. Field staff indicated that complex crossings near the pipeline, or those crossings requiring a heavy equipment assessment, are escalated to the Coordinators and the engineers in Halifax and/or Waltham in order to ensure appropriate technical review. The Coordinator in each province reports to and takes direction from the Manager, right-of-way (RoW) Division, East RoW in Head Office (Waltham, MA). The current structure and reporting relationships are well understood by field staff. Interviews confirmed that there is a clear definition of roles and responsibilities in the Crossing Program.

During the audit, an area of potential concern was noted with respect to adequacy of resourcing of the Coordinators' positions. The Coordinators, while managing the Awareness, Emergency Response and Land Matters Programs, also have significant responsibilities for crossing-related activities. It was identified during the audit that there is a small number of staff in each office performing multi-task roles and the staffing level is currently effective due to the large number of long-term staff.

However, if circumstances change such as an increase in staff turnover or in crossing activities, the Operator may not be able to remain effective in carrying out its Crossing Program. It is recommended that the Operator review the organizational structure and responsibilities related to the Crossing Program to maintain a compliant level of 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:

As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including activities related to third party excavation and construction activities near the M&NP system.

The Operator is in the process of implementing a Management of Change (MOC) process which outlines the identification,

assessment and implementation of changes once they have been approved by the appropriate responsible individuals according to the *EHS MS MOC Performance Standard 2.7*.

However, the Board could not verify that there was a fully implemented MOC procedure. The current process did not include proactive formal identification of required changes and a formal analysis of the effects that the changes may require.

Although an MOC process exists, the audit identified that the present MOC process is only partially implemented. As the regulations require the MOC to be implemented as designed, this element has been evaluated as Non-Compliant

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:

As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including activities related to third party excavation and construction activities near the M&NP system.

Crossing related activities such as locating and post-activity inspections are performed by Coordinators and operations technical staff as part of their routine duties. The majority of the Operator's staff are long-term employees who have been trained to these activities during their tenure and on an "as-required" or "as-available" basis. For example, training on the pipeline locate equipment has been provided in this manner by the vendor. Also, the Operator utilizes mentor-based training for its new and existing employees.

Document review confirmed that training for the field staff is being managed. Hard copies of training records are maintained by the administrator in the regional offices and electronic versions are managed at an offsite location (Houston, Texas). Managers and employees receive electronic notifications when select training is due to be renewed. There is an annual evaluation on overall performance and the records are maintained by administrative staff.

Although field technicians were being given training and that training was documented and managed, at the time of the audit, the Board was unable to review a formally established training program for staff performing crossing activities. However, interviews with senior staff indicated that the Operator is developing a matrix establishing training and qualifications requirements for application to its technical staff. As well, in response to the recent hiring, management developed a list of core training required for any new technical level field staff. This list will serve as an initial inventory of training needs for all field staff and help populate the matrix described above.

The company has a process to ensure its contractors have the appropriate competencies in completing its crossing related activities. It was noted that the Operator has a list of pre-approved contractors to perform duties such as crossings and integrity digs. These contractors are evaluated upon completion of each contract.

The Operator was unable to demonstrate that training requirements for the Coordinator roles had been formally included in its training program. These positions have evolved to include tasks with varying degrees of technical knowledge required and training has been provided on an ongoing basis. However, senior staff indicated that there are no succession plans in place or skill inventories developed to identify the training requirements for the Coordinator positions.

Although the Operator has established training requirements, the management of training records and the communication of renewal notices for crossing related duties for technical staff, it was not able to demonstrate that there is a formal matrix. In order to ensure Coordinators maintain the appropriate training in the future, and that the training needs for staff at that level are documented, it is recommended that the Operator formally identify, document and incorporate the training needs of the Coordinators into the training program.

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; and
- 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:

As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including activities related to third party excavation and construction activities near the M&NP system.

Internal communication takes place through regular face-to-face meetings as well as frequent phone conversations and consultations since field staff cover large areas. 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.

For external stakeholders, M&NP maintains a company website as one way to effectively communicate regarding living and working safely around its pipeline. At the time of the audit, the M&NP site contained adequate 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 internal and external mechanisms in place for communicating third party related activities, the Operator could not demonstrate that there is a formalized and implemented 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.

The Operator was able to demonstrate that it has adequate communication processes regarding crossing related information. However, the Board recommends that information related to third party activities be included in a 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 Z662-07 Clause 10.2.2(e) and (f)
PCR Part II sections 10 and 11

Assessment:

As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including activities related to third party excavation and construction activities near the M&NP system.

The Operator staff follows the procedures and processes documented in the M&NP O&M Manual and well as Spectra Energy Transmission (SET) Standard Operating Procedures (SOP). Revision logs in each of the procedures confirm that these procedures are periodically reviewed and revisions are signed off by Management. The Operator's administrative staff manages the majority of the crossing related information in each regional office. 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 and the outdated versions are removed. The administrative staff also control and document the distribution of its as-built plans as part of the crossing application file.

There is currently an initiative that is automating the maintenance of procedures. Operational Technicians are participating in an SET SOP harmonization project with the U.S. office using "Veriforce" software. Changes to procedures are evaluated by staff. Once approved they are integrated and communicated to applicable employees. The system alerts other staff that there has been a change to

a process or procedure and the system ensures that each employee signs off verifying that they have acknowledged the change.

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

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 M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including activities related to third party excavation and construction activities near the M&NP system.

The M&NP RoW goes through both urban and rural settings and so there are several types of projects that take place nearby. Those parties who have an activity that meets the legal and company criteria for requiring permission to build or excavate, normally do so by contacting the company directly. 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 for permission 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 Coordinators typically observe the construction or excavation activity.

Normal operations for crossings-related duties are described in the O&M Manual. The Coordinators for each province address the more complex crossings with support from the engineers in the Halifax, NS or Waltham, MA office. In cooperation with the senior

staff such as the Area Manager, operational staff indicated a high level of involvement in the maintenance and enhancement of the procedures. Operational staff in the field offices are long term staff and the majority of them have been with the company since the pipeline was being built or shortly thereafter. As the teams consist of cross-trained experienced technicians, they perform many of the front line duties regarding crossings, such as:

- Conducting pre-job meetings;
- Attending all crossing installations on the RoW and within 5 metres and completing the pipeline inspection reports;
- Performing visual analysis to identify anomalies in the coating such as corrosion which would be referred to Head Office for review; and
- Meeting with third parties and performing pipeline locates.

The Operator was able to demonstrate that it has documented procedures that address processes for normal operating conditions. Interviews and document review confirm that Operations staff follows the O&M Manual for addressing normal hazards related to crossings.

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 consequences 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 Clauses 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 noted that the Operator has conducted table tops that tested these types of emergencies such as third party damage. The Emergency Preparedness and Response Program was evaluated as a distinct program as part of this audit. For an evaluation of the 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 M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including activities related to third party excavation and construction activities near the M&NP system. The Operator's inspection procedures dictate that inspection-related duties are to be performed by technical field staff. For example, if the pipeline is exposed, field staff conduct inspections of the pipeline to document the condition, take pictures and check for anomalies. Also, these staff conduct surveillance and monitoring of the M&NP system by various means. The urban sections of the M&NP line are driven by technical staff once a week. Staff indicated that they are aware of the conditions and situations that need to be noted in the reports, such as signage issues and evidence of unauthorized activity. The entire RoW is flown weekly by a fixed-wing plane. Interviews with the pilot confirmed there are procedures and training pertaining to the crossing-related issues that should be reported (i.e., activity or equipment on the RoW). Air patrol was aware of the reporting procedure which requires that patrols are documented and any issues are reported to the regional office to ensure they are investigated. The weekly aerial inspection reports are reviewed and then filed at the regional offices. M&NP staff also drive the RoW on an all-terrain vehicle once a year to assess its condition and repair any signage that has been damaged. Examples of the different patrol reports were reviewed as part of the audit.

For situations where encroachments such as fences were installed on the RoW without permission, they were removed. In cases where they have been allowed to remain, record review indicates that permitted encroachments are recorded. In order to ensure compliance with the PCR, Part II section 15, all facilities permitted to be installed on the RoW must be inspected to ensure "*any deterioration has been detected.*" As the pipeline is approaching its second decade of operation, any facilities that were permitted on the RoW should be inspected to ensure that they are being maintained and not posing a threat to the safety of the pipeline. In addition, in order to

ensure compliance with the PCR, Part II section 15, the SOP needs to address the requirement that all facilities permitted to be installed on the RoW be inspected to ensure any deterioration has been detected.

Although the Board was able to verify that various aspects of the surveillance and monitoring program were implemented as designed, the Operator did not demonstrate that it has developed and implemented surveillance and monitoring programs that address all legal requirements.

Compliance Status: Non-Compliant

4.2 Corrective and Preventive Actions

Expectations: The company shall have a process to investigate incidents or any non-compliances 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 preventive actions; and
- effectively implement the required corrective and/or preventive 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 M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including activities related to third party excavation and construction activities near the M&NP system.

The criteria for non-compliance are described in the PCR and the Operator has incorporated those requirements in its procedures. According to field staff, there are few incidents of unauthorized activity on the M&NP RoW with the majority of the issues identified

in the urban centres. Technical staff have had to intervene and shut down companies who were working on the RoW without a crossing agreement. Staff assert that the offenders receive awareness information. According to staff, if the activity meets the criteria for a simple crossing, field technicians follow the onsite approval process as presented in the *M&NP Facility Crossing Guidelines*. If the investigation of unauthorized activity is on the RoW or in the safety zone, follow-up consists of an informal discussion and awareness material is provided to the offender regarding the regulatory requirements and safety issues. In some cases, Operations technical staff gave onsite approvals for unauthorized activity without immediately notifying the Coordinator. Some field staff were unaware of the requirement to report each occurrence of unauthorized activity to the NEB. The Board concluded that the reporting of unauthorized activity has not been done in accordance with the PCRs or the M&NP policy. Although identified as a requirement in the NEB PCR Part II section 13 as well as *M&NP's Facility Crossing Guidelines*, the Operator's staff are not reporting all unauthorized activities to the NEB or to their Coordinator.

The Operator did not demonstrate that it has implemented its process for reporting unauthorized activity as per its Guidelines and the expectations for this element.

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 Clauses 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 M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including activities related to third party excavation and construction activities near the M&NP system.

The Operator manages its crossing-related files at the regional offices. Onsite document review confirmed that records for locates, including the locate requests that received the "all clear" when it was determined that no locate was necessary, as well as crossings and related inspection reports are kept in the regional offices and maintained for the life of the pipeline. The Coordinators maintain

complex crossing files and any subsequent reports or correspondence in the office for the life of the pipeline. Other records such as the aerial and ground RoW patrol reports are maintained in hard copy in the regional offices. As-builts are tracked as requested and distributed during the crossings application and design phase as part of records control to ensure that they are aware of who has a map of the system and why.

For the equipment related to the crossing program, office administrators manage maintenance records in System and Integrity Logging and initiate the maintenance requests based on a manufacturer recommended schedule. Documents reviewed on site such as the certificates of calibration confirm this process is being implemented as described.

The Operator was able to demonstrate that it has a process in place to maintain crossing-related files for the life of the pipeline as required.

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:

As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including activities related to third party excavation and construction activities near the M&NP system.

The Operator's internal audit process currently includes in its scope: safety; environment; emergency preparedness and response; and integrity. However, it did not mention that the PCR requirements were included in the protocols. Therefore, although some of the activities would have been reviewed under the IMP audit, PCR-specific requirements were not included. Activities related to third party excavation and construction activities form an integral part of each of those programs as the outcome of an interaction with third parties could potentially affect the safety of the public or personnel, environmental protection, and/or integrity of the pipeline.

The Operator could not demonstrate that its current internal audit process included an evaluation of the adequacy with which the PCR requirements are met.

Compliance Status: Non-Compliant

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:

OPR-99 section 53 and section 55
CSA Z662-07 Clause 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
M&NP 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 CSA Z662-07 Clause 10.2.2</p>
<p>Assessment:</p> <p>As part of an Operations and Maintenance (O&M) Agreement between M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including public awareness activities. The Operator’s Public Awareness (PA) Program is implemented by the regional Public Awareness, Emergency Preparedness and Lands Coordinators (Coordinators) in New Brunswick and Nova Scotia. The Coordinators consider local conditions and audiences when developing the PA Plan. In the Plan, the objectives indicate <i>“the purpose of the program is to educate specific audiences on responsibilities surrounding, living and working near M&NP’s pipelines.”</i> Public Awareness is one of the key components of safe-guarding the integrity of the pipeline.</p> <p>The targets for the PA Program are outlined in the PA Plan and are incorporated into the Coordinators work plans for the year. Along with presentations to target groups, the Coordinators also submit “Call before you dig” ads for publication in local trade journals as well as sponsoring related events such as contractor breakfasts.</p> <p>The Operator was able to demonstrate that it has a policy that outlines the PA Program and its goals which is administered by 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.

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 M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including activities related to third party excavation and construction activities near the M&NP system. According to field staff, PA activities are important controls in addressing the hazards imposed by unauthorized third party activity. For this reason, each regional coordinator applies their knowledge of the area habits and issues in order to identify groups that could pose a risk to the pipeline. Once incorporated into the PA plan, these core groups are contacted annually to re-iterate the message about safe work and recreation around pipelines. For example, all-terrain vehicle (ATV) drivers on the right-of-way (RoW) have been identified as a hazard because the activity can cause rutting on the RoW and a disturbance for the landowner. As a result, the Operator has incorporated into its PA Plan annual communication with the local ATV and snowmobile associations to discuss the trespass and rutting issues.

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 they relate to PA activities and has implemented appropriate controls to minimize the associated risks.

However, PA staff awareness activities are not addressed in the hazard identification process. For example, encountering a hostile audience at awareness sessions. Given the *Canada Labour Code* requirements for a “Violence in the Workplace policy,” the Operator should ensure that the activities associated with Public Awareness be included and risks assessed accordingly. (See Element 2.2 of Appendix II)

Compliance Status: Compliant with Recommendation

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

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 and 6
PCR Part II sections 4 and 5
CSA Z662-07 Clause 10.2.2(g)

Assessment:

As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program. During the interviews staff stated that, for the operational legal requirements, the Operator relies on staff participation in industry groups such as CSA and the 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.

Aside from those informal methods, the Board could not confirm that the Operator has a process to review and integrate its legal requirements into its procedure development. For example, although the Operator has established a PA Program as required by the *National Energy Board Pipeline Crossing Regulations* (PCR), it failed to recognize the legal requirement to assess the effectiveness of the PA Program as required by the PCR Part II section 4.

The Operator could not demonstrate that it had implemented a procedure that would identify and integrate the legal requirements of the PCR into the Public Awareness 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 M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including PA.

Each Coordinator plans and delivers the various aspects of the PA Program. The plans define annual goals for the Program to ensure that key stakeholders are receiving the appropriate awareness as it relates to the activities of the company. According to the Coordinators, they follow a checklist approach to ensure goals of the PA Program are being met and that key audiences are contacted and reminded of safety considerations. As outlined in the 2006 PA Plan, along with annual mail-outs to all of the landowners, there are certain core groups that have been identified for annual presentations. Groups such as ATV associations, excavators, forestry companies, park rangers and municipal planners invite the Operator representatives to make presentations annually. The Coordinators also leverage common goals with other pipeline companies that are now in the area for joint awareness activities. The Coordinators also respond to ad-hoc requests for presentations and the provision of awareness as required. The Board reviewed the plans and the logs of the presentations to confirm that audience and mail-out targets were documented and met. Documentation review also showed that adhoc presentations were also logged and counted.

The Operator was able to demonstrate that it sets PA goals annually as part of its PA Program and that the Coordinators ensure the goals are carried out.

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 and 10.2.2(b)

Assessment:

As part of an Operations and Maintenance O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including Public Awareness. The Coordinators are accountable for the development and the execution of the PA Program. These positions report to the RoW Manager of the northeast region in Head Office (Waltham, MA). The provincial district and regional managers indicated that the Coordinator positions function with little oversight within the region when it comes to PA.

The Coordinators in both Nova Scotia and New Brunswick are responsible for the delivery of PA presentations to the various stakeholder groups. Also, they are solely accountable for the delivery of several presentations, as well as ensuring that the targets are met for the landowner mail-outs. As the Coordinators also had responsibilities with technical crossing work and emergency response, the evaluation and implementation of continual improvement initiatives could be difficult.

Although it was verified that the current structure allows for the execution of the PA Program as described in the existing PA Plan, 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 to remain effective in carrying out its PA Program with the current level of staffing. It is therefore recommended that the Operator review the resourcing of PA Program to ensure that the program can remain effective in the future.

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:

As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including Public Awareness. Although a formal management of change process has not been fully implemented, there was evidence of elements of change management being implemented regarding the maintenance and improvement of operational

procedures.

It was noted that the Operator has an initiative underway to develop and implement a formal manage of change program. However, the suitability and effectiveness of the new MOC program as it relates to the Public Awareness program could not be verified.

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:

As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including Public Awareness. The two regional Coordinators are solely responsible for the delivery and execution of the PA Program. They are long-term employees with considerable and varied experience which allows them to be effective in delivering presentations and responding to concerns. Since the positions have grown with the facilities, there has been no formal training program in place for these positions with the exception of Crisis Communication training given to the Coordinators related to Emergency Management. At the time of the audit, there was no training given to conduct PA activities and no consideration given to identifying training requirements. Interviews indicated that there are no succession plans in place for the Coordinators.

Currently the PA Program is managed and delivered by experienced employees with considerable autonomy. Given that the success of the PA Program depends on the skills of the Coordinator and the role public awareness plays in the prevention of incidents, training requirements or succession plans are required to ensure continued effectiveness of the program.

The Operator did not demonstrate that has included training for PA activities in its Training Program to ensure its ongoing effectiveness.

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; and
- 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:

As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including Public Awareness.

According to field staff, the PA Plan is reviewed and adjusted annually by the Coordinators in Nova Scotia and New Brunswick. The target audiences have been identified based on landowner issues and groups that will be working around the pipelines. On a regular basis, the Coordinators also receive requests to conduct tailored presentations from groups such as municipalities, ATV associations, forestry contractors and park rangers. They also partner with local construction companies and other buried infrastructure companies to hold contractor breakfasts and sponsor ads about safe digging in local trade journals.

Landowners in both provinces receive annual letters to remind them of the safety considerations. According to staff, there are approximately 456 landowners in Nova Scotia and 475 in New Brunswick.

Presentations were reviewed for content and considered to be comprehensive and appropriate for the intended audiences. Also, the Operator's website provides adequate contact information, as well as instructions for contacting the Operator for permission to conduct work near the pipeline. The Operator demonstrated that it has communication processes in place that allow it to effectively communicate with interested persons regarding activities related to its pipelines.

Although there are several internal and external mechanisms in place for communicating public awareness activities, the Operator could not demonstrate that there is a formalized and implemented 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.

The Operator was able to demonstrate it has adequate communication processes regarding public awareness program-related information. The Board recommends that information related to the awareness activities be included in a 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 Z662-07 Clause 10.2.2 (e) and (f)

PCR Part II sections 10 and 11

Assessment:

As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including Public Awareness. The Operator's awareness program-related documentation is managed in the Fredericton, NB office. The administrator maintains the system manually by posting most recent procedures on the Area Sharepoint 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 Specifications which are executed through revision request forms. Once the procedure is changed, the administrator posts the new procedures to the intranet. The administrator is the central resource for controlling the process related documents and reports. The PA Program is largely informal and conducted by the Coordinators, who are able to readily absorb and implement any required changes.

The Operator provided documentation which describes its PA Program and that the documentation is controlled such 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:

As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including Public Awareness. The Operator has an established PA Program to inform those people who live and work around the pipeline of the existence of the pipeline as well as how to obtain permission to work in proximity of the line. Coordinators have established relationships with several local groups to ensure ongoing cooperation of groups that pose a risk to the pipeline due to their activities. For this reason, the Program has evolved over time to include not only landowners, but also local excavators, municipalities, outdoor activity associations and forestry companies.

The Coordinators work to meet the information needs of all interest parties and ensure that they respond to all requests for safety presentations. 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 consequences 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 Clauses 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 situations, such as third party damage. The Emergency Preparedness and Response Program was evaluated as a distinct program as part of this audit, for an evaluation of the 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 M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including Public Awareness.

As noted elsewhere in this report, the Coordinators review 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 audit also noted that the Operator 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.

Compliance Status: Non-Compliant**4.2 Corrective and Preventive Actions**

Expectations: The company shall have a process to investigate incidents or any non-compliances 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 preventive actions; and
- effectively implement the required corrective and/or preventive 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 Clauses 10.2.2 (g)(h) and 10.14
PCR Part II section 13

Assessment:

The Operator utilizes PA activities and related material to mitigate non-compliances with the PCR by providing information regarding safe work practices to parties that have contravened the PCR. Depending on the severity of the non-compliance, the Coordinators will conduct safety presentations with the offenders to ensure that the parties are well-informed of the regulations and safety requirements.

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 41, 51, 52, 56

CSA Z662-07 Clauses 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 M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including Public Awareness. Records of PA activities are maintained in the regional offices in binders. The Coordinators maintain records of each event that they attend and each presentation they give. The Coordinators include a list to track the groups they have presented to and awareness activities that they have participated in with other agencies promoting safe work practices around buried infrastructure. They use these records to ensure that they have contacted the core groups for awareness each year. Document review onsite confirmed that records of PA activities have been maintained in each office since the program was established.

The Operator was able to demonstrate that it maintains adequate records of PA activities and related documentation. Landowner contact information is integral to the success of the PA program because of the annual mailouts. The Coordinators use a database to manage landowner contact information. 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 and safety considerations, as well as the 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 they are not aware of a rapid rate of landowner turnover. However, as development encroaches on the pipeline, the current system of managing landowner information may not allow the M&NP's awareness material in the future to reach the people who need to know and would put M&NP 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:

As part of an O&M Agreement between M&NP and its Operator, the Operator is implementing and maintaining all aspects of the safety program including Public Awareness. The Operator's internal audit process currently includes provisions for auditing the following programs: safety; environment; emergency preparedness and response; and integrity. The PA Program for third party activity

is not included in the scope of the internal audit. Apart from the audit requirement, there is a separate legal requirement in the PCR section 5 whereby companies must assess the effectiveness of the PA Program and keep a record of that assessment. The Operator did not have records of an assessment of the PA Program.

The Operator was unable to demonstrate that its current audit program includes the PA Program.

Compliance Status: Non-Compliant

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:

OPR-99 section 53

CSA Z662-07 Clause 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
M&NP 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 55 CSA Z662-07 Clause 10.2.2 (h)(iii)	<u>Safety:</u> OPR-99 section 55 CSA Z662-07 Clause 10.2.2(h)(iii)	<u>Integrity:</u> OPR-99 sections 4, 40 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 Clause 10.2.2(h)(iii) PCR Part II sections 4 and 5	<u>Emergency Management:</u> OPR-99 section 55 CSA Z662-07 Clause 10.2.2(h)(iii)
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Assessment:

The Board considers senior management, as described in the expectations of the NEB audit protocols, to be the senior management of the certificate holder. As such, the Board assessed the level of oversight demonstrated by the Management Committee of M&NP as the holder of the operating certificate for Element 5.1, Management Review. It is the expectation of the Board that, in cases where a certificate holder has entered into an Operations and Maintenance agreement with an Operator, the responsibility to implement processes that ensure all regulatory obligations are being met on its behalf remains with the certificate holder. In this case, the Management Committee of M&NP has been designated to manage and control the business and operation of M&NP and thus bears ultimate responsibility for overseeing compliance with the NEB Act, the OPR-99, the PCR and other relevant Acts and Regulations.

The M&NP Management Committee was demonstrating elements of the required oversight expected by the Board, in that the Management Committee reviewed and monitored operational activities including performance goals at quarterly and annual meetings. M&NP also indicated that the President has informal daily communications regarding operational activities. However, it could not be demonstrated that the Management Committee is actively and formally ensuring that the management and protection programs (e.g., IMP, EHS MS and EPR Program) developed and implemented by the Operator are suitable and effective in meeting its regulatory obligations.

Through the course of the audit, the Board confirmed that the Operator was performing formal reviews of its Integrity Management Program, Environmental, Health and Safety Management System, and Emergency Preparedness and Response Program. However, the Board did not review documentation to indicate that the certificate holder was ensuring that the Operator was conducting any formal reviews of its Crossing or Public Awareness Programs.

The assessment of Element 5.1 - Management Review for each of the programs is as follows:

Integrity Management Program (IMP)

The Integrity Manual Section 15: IMP Review and Evaluation specifies that the IMP be reviewed and evaluated periodically (at least once per year). The Pipeline Integrity Oversight Committee (PIOC) is responsible for

reviewing the IMP with input from Subject Matter Experts (SME) from Houston Technical Services as well as Region Technical Staff or Area Management. The PIOC also monitors Performance Metrics for satisfactory performance every six months. Annual Corrosion Review Meetings are also held with the purpose of reviewing the status of the corrosion control systems and determine what remedial actions may be necessary based on the previous year's surveillance, monitoring and survey results. Review of the February 2010 meeting minutes indicated the attendance of appropriate personnel and appropriate detail of the meeting agenda to cover topics relevant to the IMP.

Although the IMP is being reviewed by several senior level committees to ensure its suitability; it could not be demonstrated that the results of this review are being communicated to the M&NP Management Committee.

Environment Health and Safety Management System (EHS MS)

The Operator manages the Environment Program and the Safety Program with an Environment Health and Safety Management System (EHS MS). M&NP's EHS related programs document the activities such as inspection and audits as well as the related findings for management level review. M&NP demonstrated that these documents were discussed as regular agenda items at senior Operator meetings.

In addition, M&NP confirmed that the EHS programs are evaluated on an ongoing basis through lessons learned and progress is tracked. Processes were in place to ensure adequate senior level review and assessment of the effectiveness of the EHS MS with opportunities for continual improvement.

However, the Board could not confirm that results of these reviews were being communicated to the M&NP Management Committee for review.

Emergency Preparedness and Response Program (EPR Program)

The Board verified that the Operator is conducting an annual management review of the EPR Program. Documentation and records reviewed as part of this annual review include the EPR Program, the Field Emergency Response Plan, emergency response exercises and feedback from participants, the continuing education and liaison programs and the training program. A review of annual review meeting minutes confirmed that senior Operator staff review all elements of the EPR program to assess the overall effectiveness program.

However, the Board could not verify that results of the Operator's annual management review of the EPR Program were being communicated to the M&NP Management Committee for review.

Crossing Program

For activities related to third party activity, the Board did not see any formal reporting addressing third party activity covered by the *National Energy Board Pipeline Crossing Regulations* (PCR). Further, it was noted that little if any tracking or trending done to monitor levels of third party activity. As such, the Board could not confirm that the Crossing Program has ever been assessed for suitability, adequacy or effectiveness.

Public Awareness Program

M&NP's Operator did not demonstrate that it was formally reviewing its awareness program as developed and implemented to ensure the program it is meeting all applicable regulatory requirements.

The audit could not verify that there is a formal assessment of the effectiveness of the PA Program to ensure the ongoing suitability of the PA program and its resources that has been completed and communicated to the M&NP Management Committee.

As noted above, it is the Management Committee's responsibility, to confirm and demonstrate its compliance through the development and implementation of adequate and effective programs. The responsibility of the development and implementation of these programs has been designated by M&NP to Spectra as the Operator through an Operations and Maintenance Agreement. It is the expectation of the Board that M&NP formally and actively oversee the activities of the Operator to ensure its regulatory obligations are being met on its behalf. It could not be demonstrated by M&NP that it was formally reviewing its programs as developed by the Operator to ensure they were meeting all applicable regulatory requirements and that they continue to be suitable.

Compliance Status: Non-Compliant



Appendix VIII – Company 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
- [REDACTED] – VP Audit Services (telephone interview)
- [REDACTED] – Manager EHS Audit
- [REDACTED] – Division Tech Specialist
- [REDACTED] – Senior Engineer
- [REDACTED] Senior Tech Specialist

Fredericton, NB

- [REDACTED] Area Manager
- [REDACTED] Admin Assistant NB Operations
- [REDACTED] Lands and Public Awareness Coordinator
- [REDACTED] Multi-discipline technician
- [REDACTED] Multi-discipline technician
- [REDACTED] Senior Engineer
- [REDACTED] Manager of Employee Relations



New Glasgow, NS

- [REDACTED] District Manager
- [REDACTED] Lands and Public Awareness Coordinator
- [REDACTED] District Operations Technician
- [REDACTED] District Operations Technician

Halifax, NS

- [REDACTED] EHS Specialist
- [REDACTED] Manager Regulatory Affairs



Appendix IX – M&NP Documents Reviewed
Environment and Safety Programs

Document/Record Name	Revision #	Date
SET Management System EHS Management System Manual Appendix A - Spectra Energy Transmission EHS Committee Charter	2	01/11/2007 Supersedes July 2007
Appendix B - EHS MS Management Representative Memo	2	01/11/2007 Supersedes July 2007
Appendix C - Spectra Energy Transmission EHS Extended Staff Charter	2	01/11/2007 Supersedes July 2007
Appendix D - Spectra Energy Transmission EHS (Governance)	2	01/11/2007 Supersedes July 2007
Appendix E - Definitions	2	01/11/2007 Supersedes July 2007
Appendix F - Record of Revisions	2	01/11/2007 Supersedes July 2007
SET Environment, Health & Safety Management System Manual	2	01/11/2007 Supersedes July 2007
Health & Safety Meetings Performance Standard 6.1	1	16-Apr-08
Roles, Responsibilities and Accountabilities Performance Standard 1.2	2	Sep-06
EHS Training and Awareness Performance Standard 1.4	2	Sep-06
EHS Risk Management Standard 2.0	2	29-Jan-10
EHS Due Diligence Mergers & Acquisitions Performance Standard 2.4	2	18-Jul-07
Post-Acquisition EHS Integration Performance Standard 2.5	2	18-Jul-07
EHS Divestitures Performance Standard 2.6	2	18-Jul-07
EHS MS Management of Change Performance Standard 2.7	2	Sep-06
Fleet Vehicle Management Standard 2.8	2	Jan-09
Legal and Other Obligations Performance Standard 4.0	2	Sep-06
Data Management and Recordkeeping Performance Standard 4.4	2	Sep-06
Internal and External Communication Performance Standard 6.0	2	Sep-06
Internal and External Communication Guidelines Performance Standard Attachment 6.0a	2	Sep-06



Document/Record Name	Revision #	Date
Community Relations Performance Standard 6.3	2	Sep-06
EHS Objectives (Goals), Targets and Strategies Performance Standard 7.1	2	Sep-06
Monitoring and Measuring Performance Standard 7.3	2	Sep-06
EHS Audits Performance Standard 9.1	2	Sep-06
EHS Audits Performance Standard Attachment 9.1a	2	Sep-06
Nonconformance, Corrective and Preventive Action Performance Standard 9.3	2	Sep-06
Management System Review Performance Standard 9.4	2	Sep-06
Self Assessment Performance Standard 9.5	0	New
Contractor H&S Management Performance Standard 5.0	2	1-Jan-09
Incident Learning and Prevention Performance Standard 8.1	2	31-Mar-10
SOP Harmonization – Transition Phase Statement	0	
U.S. Transmission Contractor Safety Procedures	0	1-Mar-10
Environmental, Health & Safety Policy	0	
Contract Administration Manual US Operations and M&NP Canada Operations	2	18-Apr-08
Audit Services Charter and Policy		1-Nov-08
M&NP Environmental Manual	0	2007
Spectra Energy Operations Committee 2010 Objectives		2010
Spectra Energy EHS Committee 2010 Objectives		2010
Quarterly Employee Meeting, Slides Information		12-May-10
Personal Safety Action Plan, three different employees		2010
Health and Safety Facility Inspection Checklist, Stoney Point		2010
Contractor Performance Summary Spectra Energy		24-Mar-10
Training - Learning Management System Records - District Operation Technician (Nova Scotia)		
Veriforce - Modifications to tasks 412 - 418 and 609 - Low impact changes		23-Sep-09
Vendor Report - Contractor Information Database		
Safety Meeting Minutes - Attendance Record		10-Apr-10 16-Mar-10 1-Jan-10
EPASS - Environmental Performance and Safety System		
IWOL - Chatham Office Incident Report		29-Jun-10
Field Audit - Eliot Compressor Station		16-Jun-09
EHS Management System Audit Protocol		27-Jul-09
Spectra Energy EHS Blended Scorecard		May-10



Document/Record Name	Revision #	Date
SET Canadian Northeast Operations EHS Management System Audit #09ECD-001		Sep-09
2010 Goals - US Operations (Includes US EHS Goals)		2010
Risk Registry for Union Church, MS - Environmental		2-Dec-09
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
Levels of EHS Responsibility for SET		1-Oct-2008
Project Safety Inspection Form		24-Mar-2010
Health and Safety SOP Table of Contents		12-Apr-10
SET Operations Committee Charter		01/11/2007 Supersedes July 2007
Management System Review Performance Standard 9.4	2	Sep-06
EHS Risk Registry Guide		31-Aug-09
EHS Facility Risk Assessment Program	1	Jan-10
M&NP Environmental Manual	0	Dec-09
Project Services Agreement (Non-construction)		21-Apr-10
Pre-job Safety Meeting		26-Mar-10
Scope of work & EHS Risk Communication (Form 7T-311)		23-Mar-10
Contractor Safety Procedures Training		
US Transmission Contractor Safety Procedures		1-Mar-10
SET Maritimes Provinces EHS Training Assignments		18-Mar-10
Safety and Communications Agenda and Minutes, NS Operations		11-Mar-10
Safety and Communications Agenda and Minutes, NS Operations		20 May 20010
M&NP NS Operations, Tabletops ERP		2009
Eureka Emergency Mock Exercise		2009
Tabletops		2008
Tabletops		2007
ROW Mowing Schedule		2009
ROW Mowing Schedule		2010
EHS Role Description Document, Technician trainee, Technician		18-Feb-09
EHS Role Description Document, Supervisor/District Manager		18-Feb-09



Document/Record Name	Revision #	Date
EHS Role Description Document, Area Manager		18-Feb-09
Training Session Attendance Sheet, Respirator Training		20-May-10
H2S Alive Training certificate, [REDACTED] and [REDACTED]		16-Apr-10
Lift Truck Operator Safety Training Program, [REDACTED]		8-Mar-10
Attendance Record, Montie Safety CPR Refresher Training		24-Jun-10
Certificate of Attendance, Workplace Electrical Safety Workshop based on CSA Z462, [REDACTED]		8-Jun-10
Attendance Record, Contractor Safety Procedures, Northeast, New Glasgow		10-Mar-10
Line Locator Re-certification, [REDACTED]		29-Jan-07
Truck/Trailer Combination Safety Seminar, [REDACTED]		30-Apr-09
Defensive Driving, [REDACTED]		2-Dec-04
Chainsaw bucking, felling awareness, clearing saw awareness, [REDACTED]		6-Nov-09
MNP Spills Online Class Certificate, [REDACTED]		13/03/2009
TDG certificate, [REDACTED]		3-Apr-09
Workplace Standard First-Aid CPR A, AED, [REDACTED]		14-Dec-07
Fire extinguisher training course, certificate of completion (staff in New Glasgow)		16-Jul-09
MNP EHS Training Completion Report		
Scaffolding Basics, Certificate, [REDACTED]		26-Feb-10
H&S Management of Change Process/Form		30-Jun-09
M&NP Area Manager, Operations Job Posting		
M&NP Corrosion Technician Job Posting		
M&NP New Brunswick Operations Monthly Safety Meeting		16-Feb-10
M&NP New Brunswick Operations Monthly Safety Meeting		18-May-10
Spectra Energy Audit Coordination for US Operations, Integrating, Enhancing and Streamlining Current Processes		10-Nov-09
Monthly SET US Audit Assurance Summary Report		28-Feb-10
Monthly SET US Audit Findings Status Report		28-Feb-10
Monthly SET US Audit Assurance Summary Report		31-Mar-10
Monthly SET US Audit Findings Status Report		31-Mar-10
SET West Legal Registry		Apr-10
Spectra Energy Charter		Jan-10
M&NP Environmental Issues Report Form (Operation and Maintenance Phase)		



Document/Record Name	Revision #	Date
2010 Beaver control file (a.k.a Dossier de Castor)		2010
MNP Eastern Gas Pipeline RoW Mowing Program		2009
MNP Eastern Gas Pipeline Cut RoW - Utopia Lateral File		2009
MNP Eastern Gas Pipeline Cut Brush St George Take Off		2009
MNP Eastern Gas Pipeline Cut Brush into MLV518		2009
MNP Eastern Gas Pipeline Vegetation @CP239		2009
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
Brunswick Pipeline Project Environmental Issues Report (O&M Phase) - WC - Tributary to Hazen Creek		9-Jul-10
Brunswick Pipeline Project Environmental Issues Report (O&M Phase) - Beyea Brook		9-Jul-10
MNP RoW Mowing/Cutting Records		2009-2010
Stop Work Order, pipeline installation, excavation		28-Jan-08
SET Operations Control Table - in progress		2009



Integrity Management Program

Document/Record Name	Revision #	Date
Operations & Maintenance Specifications Manual	10	10-May-10
Integrity Management Program	0	31-Mar-10
Regulatory Compliance Audit for Maritimes & Northeast Pipelines		Mar-07
ILI 2009 - 8IN Moncton Lateral Summary		2009
ILI Summary - KPO-KP191 Goldoboro to Nova Scotia		
Gold 1 KP387 to Baileyville - Pipeline Listing		
ILI 2008 - 8IN Point Tupper Lateral Summary		2008
SET Internal Corrosion Monitoring and Mitigation		8-Jun-10
M&NE Canada - 2010 Annual Corrosion Review Meeting		9-10-Feb-10
Brunswick Pipeline - 2010 Annual Corrosion Review Meeting		9-10-Feb-10
Section 11.10 Water Vapor Determination		
Spectra Energy Gas Transmission Area Pipeline Managers and Supervisors		
Eastern Canada - Pipeline Integrity Assessments		
Pigging Training CD		7-Jul-10
Eastern Canada - Risk Data		
SET SOP - SOP Administration, Volume 2		9-Apr-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
MNP, Pig Procedure, Halifax Lateral Urban Section		Sep-08
M&NE Halifax lateral, design spec		16/11/05
Installation, Operation and Maintenance Manual for Horizontal Bandlock™2 Closure		2007
Spectra Energy Schematic, Receiving Barrel (KP-124) 12" Halifax Lateral (Urban Section)	C	6-Apr-07
Spectra Energy Schematic, Sending Barrel (KP-0.0) 12" Halifax Lateral (Rural Section)	C	6-Apr-07
Spectra Energy Schematic, Sending Barrel (KP-118) 12" Halifax Lateral (Urban Section)	C	6-Apr-07
Spectra Energy Schematic, Receiving Barrel (KP-118) 12" Halifax Lateral (Urban Section)	C	6-Apr-07
Spectra Energy Material/Equipment Specification Line Pipe Internal Coating		4-Dec-03
M&NP Specification for Internal Coating		12-Mar-97



Document/Record Name	Revision #	Date
SET Annual Cathodic Protection Survey		2009
Dynamic Risk Assessment Systems Inc. Internal Corrosion Algorithm		
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
Form 7T-33AW for wheel count 132785.5 internal corrosion anomaly (from Binder: Anomaly Investigation 8" Point Tupper to Hawkesbury)		20-May-09

Emergency Preparedness and Response Program

Document/Record Name	Revision #	Date
Field Emergency Response Plan	0	1-Apr-02
Emergency Preparedness and Response Program	6	May-10
M&NP First Responder Presentation		
M&NP Letter to Emergency Planning Zone Owner/Resident		sent out annually
M&NP Safety and Emergency Information for Landowners		
M&NP and Brunswick Pipeline Accu-link Weekly on call cell phone testing		2010
MNP Emergency Preparedness & Response Program Compliance Documentation Section 1 - Introduction		2003-2010
MNP Emergency Preparedness & Response Program Compliance Documentation Section 2 - Risk Assessment		2009
MNP Emergency Preparedness & Response Program Compliance Documentation Section 3 - Agency List		
MNP Emergency Preparedness & Response Program Compliance Documentation Section 4 - Agency Liaison Program		
MNP Emergency Preparedness & Response Program Compliance Documentation Section 5 - Public Continuing Education Program		2002-2009
MNP Emergency Preparedness & Response Program Compliance Documentation Section 6 - Emergency Preparedness Manuals		
MNP Emergency Preparedness & Response Program Compliance Documentation Section 7 - Training		2002-2010



Document/Record Name	Revision #	Date
MNP Emergency Preparedness & Response Program Compliance Documentation Section 8 - Validation		2002-2009
MNP Emergency Preparedness & Response Program Compliance Documentation Section 9 - Summary		2002-2009
MNP Saint John Field Exercise/Mock Emergency Binder		25-Jun-08

Crossing and Public Awareness Programs

Document/Record Name	Revision #	Date
Facilities Crossing Guidelines Appendix B to Operations and Maintenance Specifications Manual	2	1-Jun-05
M&NP Public Awareness Plan	0	2006
M&NP Public Awareness Presentation		
M&NP Letter to Land Owners		sent out annually
Brunswick Pipeline Operation and Maintenance Specifications Manual: Pipeline Patrols and Surveys		Oct-08
M&NP Operation and Maintenance Specifications Manual: Pipeline Patrols and Surveys		Feb-07
SET SOP Volume 1 - Pipeline: Aerial Pipeline Patrol		8-Jun-10
M&NP Monthly Aerial Patrol Reports		2010
M&NP Security Patrol Reports		2010
M&NP and Brunswick Daily Pipeline ROW Activity		2010
M&NP Line Locates All Clear		January 2010 - April 2010
M&NP and Brunswick Pipeline Line Locate Requests On Site Follow Up Required		2010
M&NP Public Awareness New Brunswick Operations, Binders 1 and 2		2006-2010
2009 Performance Review Report - Lands/Public Awareness Coordinator		22-Feb-10
SET Pre-job Safety Meeting - Crossing Construction		18-Jun-08
M&NP Letter of Commitments		22-Apr-97
Crossings File - Landowner		10-Jan-00
M&NP As-Built Requests 2009		2009
M&NP Contractor Safety Information		
M&NP Facilities Crossing Guidelines (Appendix B to Operation & Maintenance Specifications Manual)	4	Jun-05
M&NP O&M Specifications Manual Locating and Excavating	2	Feb-07



Document/Record Name	Revision #	Date
Line Locate Flow Chart		
M&NP - Policies and Procedures One Call Procedures		12-Oct-07
Accu-Link Call Centers Business Schedule		Jun-08
M&NP O&M Specifications Manual Work On Live Lines	1	Feb-07
SET SOPs Volume 1 - Pipeline: RoW Encroachments		8-Jun-10
Encroachment Management Forms		
Schedule of Training and Training Records for Five Multi-Discipline Techs in Fredericton, NB		various
M&NP Certificates of Calibration		1999-present
M&NP and Brunswick Pipeline Employee/Company Guidelines		