



File OF-Surv-OpAud-W102-2016-2017 01  
23 February 2017

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Dear Mr. Fiedorek:

**Final Audit Report for Westcoast Energy Inc., Carrying on Business as  
Spectra Energy Transmission (Westcoast)**

The National Energy Board (NEB or the Board) has completed its Final Audit Report of Spectra. The audit focused on sub-element 4.1 *Inspection Measurement and Monitoring* of the NEB Management System and Protection Program Audit Protocol.

A Draft Audit Report documenting the Board's evaluation of Spectra was provided to Spectra on 15 December 2016 for review and comment. Spectra decided not to provide any comments on the Draft Audit Report. Since the Board had no comments to consider, no changes were made to the Draft Audit Report and its Appendices.

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

- The *National Energy Board Act*;
- The *National Energy Board Onshore Pipeline Regulations*;
- The *National Energy Board Pipeline Damage Prevention Regulations - Obligations of Pipeline Companies* (DPR-0); and
- any conditions contained within applicable Board certificates or orders issued by the Board (collectively referred to as, Legal Requirements).

Spectra was required to demonstrate the adequacy and effectiveness of the methods selected and employed within its management system and programs to meet the regulatory requirements listed above.

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The Board has enclosed its Final Audit Report and associated Appendices with this letter. The Board will make the Final Audit Report public and it will be posted on the Board's website.

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

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

If you require any further information or clarification, please contact Niall Berry, Lead Auditor, at 403-471-192.

Yours truly,

*Original signed by*

Sheri Young  
Secretary of the Board

c.c. 

National Energy  
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*National Energy Board Onshore Pipeline Regulations (OPR)*  
**Final Audit Report of the Westcoast Energy Inc., carrying on business as Spectra Energy  
Transmission.  
Pipeline Patrol Activities**

**File OF-Surv-OpAud-W102-2016-2017 01**

Westcoast Energy Inc., carrying on business as Spectra Energy Transmission  
Suite 2600, 425 1st Street SW  
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## Executive Summary

Companies regulated by the National Energy Board (NEB or the Board) must demonstrate a proactive commitment to continual improvement in safety, security and environmental protection. Pipeline companies under the Board's regulation are required to incorporate adequate, effective and implemented management systems into their day-to-day operations.

This report documents the Board's audit of the above ground monitoring and surveillance activities (collectively referred to as patrol activities) of Spectra Energy Transmission. Specifically, this audit focussed on the adequacy and effectiveness of the patrol activities for its NEB-regulated pipeline facilities that are part of sub-element 4.1 **Inspection, Measurement and Monitoring** of the National Energy Board Management System and Protection Program Audit Protocol published in July 2013. Given the scope of this audit, it also included the requirements contained within the *Damage Prevention Regulations – Obligations of Pipeline Companies* (DPR-O) and the Canadian Standards Association (CSA Z662-15).

The Board conducted the audit using the audit protocols detailed in Appendices I and II. Appendix I focused solely on sub-element 4.1 Inspection, Measurement and Monitoring, whereas Appendix II evaluated how the company's patrol activities interacted with the other elements of the Spectra Energy Transmission's management system; specifically as they relate to the inputs and outputs and linkages between the other management system elements.

The Board's audit of Spectra Energy Transmission's federally regulated facilities found that Spectra Energy Transmission demonstrated that it conducts various types of patrol activities to identify hazards on its rights of way, particularly relating to the identification and management of potential unauthorized third party activity. As patrol activities are expected to identify several types of hazards along the rights of way, the audit found that Spectra Energy Transmission's practices regarding several aspects of its patrols did not meet the Board's requirements. A detailed assessment of the patrol activities documented in Appendix I of this audit report

The Board also assessed the extent to which Spectra Energy Transmission's management system processes were integrated with its patrol activities. The Board also evaluated whether Spectra Energy Transmission could demonstrate an established link to its patrol activities where required. The details of this assessment are outlined in Appendix II of this audit report.

Spectra Energy Transmission was able to demonstrate that most of the governance sub-elements had been integrated with the patrol activities. The Board also noted that Spectra Energy Transmission was conducting several types of patrols. Interviews and document review confirmed that Spectra Energy Transmission's patrol activities were being conducted in order to identify and prevent unauthorized activities.

During its evaluation, the Board noted deficiencies regarding the execution and evaluation identified on patrol activities. The details of this assessment are outlined in Appendix I and II of this audit report. The three Non-Compliant findings are:

- Spectra Energy Transmission was unable to produce documented evidence that all their ground and aerial inspection patrols conform to the specific conditions and activities required by CAN/CSA Z662-15.
- While Spectra Energy Transmission has demonstrated it has developed process and system requirements for majority of its patrols the board has determined that additional process and requirements need to be established and implemented for ground patrols.
- Spectra Energy Transmission could not demonstrate that it has conducted any audits that included Patrols to determine whether its patrol activities are adequate or effective.

Within 30 days of the Final Audit Report being issued, Spectra Energy Transmission must develop and submit a Corrective Action Plan (CAP) for Board approval. The CAP must detail how Spectra Energy Transmission intends to resolve the non-compliances and deficiencies identified by this audit. The Board will verify that the corrective actions are completed in a timely manner and applied consistently across Spectra Energy Transmission's system. The Board will continue to monitor the implementation and effectiveness of Spectra Energy Transmission's management system and programs through targeted compliance verification activities as part of its ongoing regulatory mandate.

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## 1.0 Introduction: NEB Purpose and Framework

The NEB's purpose is to promote safety and security, environmental protection, and efficient energy infrastructure and markets in the Canadian public interest, within the mandate set by Parliament in the regulation of pipelines, energy development and trade. In order to meet this the National Energy Board Onshore Pipeline Regulations (OPR), requires pipeline companies to operate in a systematic, comprehensive and proactive manner that manages risks with effective, fully developed and implemented management systems and protection programs that provide for continual improvement. A carefully-designed and well-implemented management system supports a strong culture of safety, and is fundamental to keeping people safe and protecting the environment. To evaluate compliance with its regulations, the Board audits the management system and programs of regulated companies. The Board requires each regulated company to demonstrate that they have established and implemented, adequate and effective methods for proactively identifying and managing hazards and risks.

This audit is one in a series of focused audits that the Board is conducting of company right of way (ROW) patrol activities and is focused on sub-element 4.1 ***Inspection, Measuring and Monitoring*** of the National Energy Board Management System and Protection Program Audit Protocol published in July 2013.

The Board developed its audit protocols to evaluate Spectra Energy Transmission's patrol activities and to verify that they are appropriately implemented and managed. To this end, the Board conducted interviews with corporate and regionally-based staff; field inspections and reviewed documentation and records related to patrol activities. This enabled the Board to evaluate the adequacy, effectiveness and implementation of the patrol program. The Board based the scope and location of the field inspections on the needs of the audit. The inspections follow the Board's standard inspection processes and practices. Although they inform the audit, inspections are considered independent of the audit. If unsafe or non-compliant activities are identified during an inspection, they are actioned as set out by the Board's standard inspection and enforcement practices.

After completing its field activities, the Board developed and issued a Draft Audit Report (this document). The Draft Audit Report outlines the Board's audit activities and provides evaluations of the company's compliance with the applicable regulatory requirements. Once the Board issues the Final Audit Report, the company must submit and implement a Corrective Action Plan to address all non-compliances identified. Final Audit Reports are published on the Board's website. The audit results are integrated into the NEB's risk-informed lifecycle approach to compliance assurance.

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## 2.0 Background

The Board selected companies for the audits of patrol activities based on the NEB risk model. This model combines the inherent risks of the pipeline system with the companies' performance in other compliance areas. Westcoast Energy Inc., carrying on business as Spectra Energy Transmission, owns the Westcoast Transmission System (Westcoast). Westcoast extends from points in Yukon, the Northwest Territories, Alberta and BC, to the Canada-U.S. border near Huntingdon, BC. At the border Westcoast connects to Williams Northwest Pipeline, which supplies natural gas to the U.S. Pacific Northwest. More information on the federally regulated system is available in Appendix III of this audit report.

This audit is focused on sub-element 4.1 *Inspection, Measuring and Monitoring* of the National Energy Board Management System and Protection Program Audit Protocol published in July 2013.

The Board developed its audit protocols to evaluate Spectra Energy Transmission's patrol activities and to verify that they are appropriately managed. To this end, the Board conducted interviews, inspections and reviewed documentation and records related to patrol activities.

## 3.0 Audit Objectives and Scope

The objective of the audit was to evaluate Spectra Energy Transmission's performance against the applicable requirements specifically as they relate to patrol activities. The scope of the audit focused on sub-element 4.1 of the Board's audit protocol to verify that patrol activities are adequately identifying issues noted on the rights-of way to promote environmental protection, pipeline integrity, emergency response, security and damage prevention. The Board also examined the degree to which patrol activities were integrated with the company's management system to ensure the protection of the environment and the safety and security of the public.

This audit was based on the requirement that federally regulated pipeline companies are required to conduct patrols of their rights of way to actively monitor any potential hazards that could jeopardize the safety of people and the environment. The information gathered and issues observed by patrol activities must be communicated to the appropriate protection programs for tracking and resolution. Equally important, in an established management system, some of the hazards identified by the protection programs areas of the company's management system must inform the patrol activities to promote effective monitoring of these hazards.

For this audit, Spectra Energy Transmission was audited against the requirements contained within the following legal requirements as they relate to patrol activities:

- The National Energy Board Act;
- The National Energy Board Onshore Pipeline Regulations;
- The Damage Prevention Regulations;



- Canadian Standards Association (CSA) Z662 – 15 – Oil and Gas Pipeline Systems; and
- Spectra Energy Transmission's policies, programs, practices and procedures.

During the audit, the NEB conducted physical field inspections, reviewed documentation and interviewed the company's staff with the aim to:

- obtain a snapshot of the patrol activities being conducted;
- assess the implementation of company management systems as they relate to pipeline patrols;
- allow for a broader assessment of industry performance with regards to pipeline patrols; and
- provide clarity around the Board's expectations regarding these patrol activities.

#### **4.0 Audit Process, Methodology and Activities**

The Board informed Spectra Energy Transmission of its intent to audit its NEB regulated facilities in a letter dated 9 August 2016. Following the issuance of this letter, Board audit staff met with Spectra Energy Transmission to arrange and coordinate this audit. The Board also provided Spectra Energy Transmission with an information request guidance document as well as discussion questions to help Spectra Energy Transmission prepare for the audit, and provide access to documentation and records to demonstrate its compliance. Spectra Energy Transmission established a digital access portal for Board staff to review documentation and records.

On 7 September 2016, an opening meeting was conducted with representatives from Spectra Energy Transmission in Calgary, Alberta to confirm the Board's audit objectives, scope and process. The opening meeting was followed by various field level audit activities as described in the table below. Throughout the audit, Board audit staff gave Spectra Energy Transmission daily summaries which included requests for additional documentation and interviews.

On 11 November 2016, the Board sent a pre-closeout information request to Spectra Energy Transmission. At this meeting Board staff and Spectra Energy Transmission staff discussed potential deficiencies identified during field activities and discussed additional information that could be of value to the Board prior to compiling its draft audit report. An audit close-out meeting was held on 15 November 2016 to provide Spectra Energy Transmission with a description of the recommendations that staff would be bringing to the Board for decision.



## **SPECTRA ENERGY TRANSMISSION Pipeline Patrol Audit Office and Field Activities**

- Audit Opening meeting - 7 September 2016
- Pipeline patrol Air patrol (Fraser Valley, Coquihalla corridor) – 16 September 2016
- Audit interviews, Calgary Office – 19 September 2016
- Audit interviews, Ft St John –Office 22 , 23 September 2016
- Audit interviews, Prince George Office- 4 October 2016
- Audit Interviews, ( telephone )Savana Office 7 October 2016
- Audit interviews , Hope Office October 14 2016
- Audit interviews, Calgary Office October 17 2016
- Audit closing meeting, Calgary Office November 15 2016

### **5.0 Summary of Audit Findings**

In order for the patrol activities to be assessed for compliance to the requirements as well as their role in the company's protection programs, the activities were audited using two complimentary protocols. Appendix I is divided in five sections, with each section covering a partial component of the Board's expectations for sub-element 4.1.

In Appendix II, the Board's Audit Protocol identifies five Management System elements which are further broken down into 17 sub elements. Each sub-element reflects a number of regulatory requirements. As this audit is focused on patrol activities and related inputs and outputs from other protection programs, many of the processes required by the OPR were considered within the scope of this audit. If a company's program is found to be deficient with respect to any regulatory requirement as it relates to pipeline patrols, a Corrective Action Plan (CAP) will be required in order to demonstrate to the Board that appropriate actions will be taken to address the deficiency.

The following summary represents an overview of the Board's audit findings for Spectra Energy Transmission's patrol activities based on information provided for the audit.

### **Appendix I**

In Appendix I, Spectra Energy Transmission's patrol activities were audited against the relevant legal requirements to answer the question:

*Does the company conduct its patrol activities in accordance with all applicable legal requirements?*

Through a review of inspection reports, the Board confirmed that patrol reports were being generated after each patrol. A review of a sample of aerial patrol reports identified that these reports did not include confirmation that each of the CSA-Z662-15 clause 10.6.1.1 conditions and activities were being monitored or assessed during patrols.

This type of reporting by exception does not allow for any monitoring of developing trends that can affect the safety and operation of the pipeline nor does it document an assessment of the various potential issues.

The full assessment is available in Appendix I of this report.

## Appendix II

With Appendix II, Spectra Energy Transmission's patrol activities were audited and evaluated against the processes, procedures and standards that it identifies as being part of its management system and protection programs.

The Appendix II protocol focuses on the following question:

*Can the company demonstrate that the patrol activities and the resulting inputs and outputs are linked to the management system processes required by the OPR?*

The audit found that Spectra Energy Transmission has integrated its patrol activities into the majority of the management system sub-elements

The Non-Compliant findings described in Appendix II were due to:

- Spectra Energy Transmission relies on workers to continually monitor ROW during their daily activities (Ad Hoc patrols) this monitoring is not documented in an Standard Operating Procedures (SOP) or written into job requirements and through interviews and record review the auditors noted inconsistent monitoring practices
- Spectra Energy Transmission could not demonstrate that it has conducted any audits that included Patrols to determine whether its patrol activities are adequate or effective.

The full assessment is available in Appendix II of this report.

## 6.0 Conclusions

Companies regulated by the NEB must demonstrate a proactive commitment to continual improvement in safety, security and environmental protection. Pipeline companies under the Board's regulation must establish and implement effective management systems in their day-to-day operations. The Board has determined that although Spectra Energy Transmission is conducting patrol activities, 3 findings were noted in 3 sub-elements of its management system that have not been consistently implemented with its patrol activities.

Upon receipt of the final report, Spectra Energy Transmission must develop a corrective action plan describing its proposed methods to resolve the non-compliances identified in Appendices I and II and the timeline in which corrective actions will be completed. Spectra Energy Transmission is required to submit its corrective action plan for Board approval within 30 days

of the final Audit Report being issued. The Board will make its final Audit Report and Spectra Energy Transmission's approved corrective action plan public on the Board's website. The Board will assess the implementation of Spectra Energy Transmission's corrective actions to confirm they are completed in a timely manner and on a system wide basis until they are fully implemented. The Board will also continue to monitor the overall implementation and effectiveness of Spectra Energy Transmission's patrol activities.

## 7.0 Audit Terminology and Definitions

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

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

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

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

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

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

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

**Established:** A process or other requirement has been developed in the format required. It has been approved and endorsed for use by the appropriate management authority and communicated throughout the organization. All staff and persons working on behalf of the company or others that may require knowledge of the requirement are aware of the process requirements and its application. Staff has been trained on how to use the process or other requirement. The company has demonstrated that the process or other requirement has been implemented on a permanent

basis. As a measure of “permanent basis”, the Board requires the requirement to be implemented, meeting all of the prescribed requirements, for three months.

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

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

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

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

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

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

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

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

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*management system and processes must apply and be applied to the programs described in section 55.*

**Non-Compliant:** A program element does not meet legal requirements. The company has not demonstrated that it has developed and implemented programs, processes and procedures that meet the legal requirements. A corrective action plan must be developed and implemented.

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

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

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

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

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

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

*Further, OPR section 6.5 (1) indicates that each process must be part of the management system and the programs referred to in OPR section 55. Therefore, to be compliant, the process must also be designed in a manner which considers the specific technical requirements associated with each program and is applied to and meets the process requirements within each program. The Board recognizes that a single process may not meet all of the programs; in these cases it is*

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*acceptable to establish governance processes as long as they meet the process requirements (as described above) and direct the program processes to be established and implemented in a consistent manner that allows for the management system to function as described in 6.1.*

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

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

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

## **8.0 Abbreviations**

CAP: Corrective Action Plan

CLC: Canada *Labour Code Part II*

COHSR: Canada Occupational Health and Safety Regulations

CSA Z662-11: CSA Standard Z662 entitled *Oil and Gas Pipeline Systems*, 2015 version

SET: Westcoast Energy Inc., carrying on business as Spectra Energy Transmission: Spectra Energy Transmission Pipelines Inc. or Spectra Energy Transmission.

GOT: Goals, Objectives and Targets

MOC: Management of Change

NEB: National Energy Board

OPR: *National Energy Board Onshore Pipeline Regulations*

PLM: Pipeline Maintenance

ROW: Right-of-Way

SOP: Standard Operating Procedures



## National Energy Board Pipeline Patrol Audit Protocol

### Appendix I – Evaluation of Sub-element 4.1

#### CHECKING AND CORRECTIVE ACTION

##### 4.1 Inspection, Measurement and Monitoring

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

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

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

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

#### **OPR 6.5.1( r)(u), 39**

##### **NEB Assessment**

Appendix I's focus is solely on the various types of patrol activities conducted pursuant to the legal requirements. An evaluation of the patrol activities in the context of the management system and the process requirements outline in 4.1 is provided in Appendix II of this report.

##### **1.0 Inspecting and Monitoring**

The Board expects companies to have an established, implemented and effective process for inspecting and monitoring the company's activities and facilities to evaluate the adequacy and effectiveness of the protection programs. In order to verify the implementation of the ROW monitoring activities, the NEB conducted several ROW inspections in urban and rural settings in support of the audit both by air and ground patrol.





Given the scope of this audit, these processes and protection programs were not reviewed for compliance or adequacy. Rather, the Board conducted a focused audit of the company's pipeline patrol activities which is typically part of the surveillance and monitoring program. Patrol activities are one method used by companies to monitor the effectiveness of the protection programs. The review in this appendix relates directly to the patrol activities that Spectra Energy Transmission had in place at the time of the audit.

Westcoast Energy Inc., carrying on business as Spectra Energy Transmission, owns the Westcoast Transmission System (Westcoast). Westcoast extends from points in the Yukon, the Northwest Territories, Alberta and BC, to the Canada-U.S. border near Huntingdon, BC. At the border Westcoast connects to Williams Northwest Pipeline, which supplies natural gas to the U.S. Pacific Northwest.

Spectra Energy Transmission provided standard operating practices 7.1 Lands Pipeline Right-of-Way Patrol and 7.4 Geotechnical Patrol, Environmental program and Integrity management program documents that describe the process, frequency, responsibilities, competencies, emergency procedures and reporting requirements of the Patrols.

**These activities are described as follows:**

- **Aerial Patrol:**  
Spectra Energy Transmission conducts routine aerial patrols of its ROW by helicopter. The remote northern gathering lines are patrolled annually and the transmission lines are patrolled monthly. The aerial Patrol is conducted by a Spectra Energy Transmission employee and/or a Pembina Pipelines representative in the Central region where Pembina and Spectra Energy Transmission share a ROW patrol bi monthly. These inspections are documented on the aerial patrols report. Employees are present as observers in all regions.
- **Geotechnical/ Hydrotechnical Patrol:**  
Spectra Energy Transmission conducts annual Geotechnical/ Hydrotechnical Patrol aerial patrols as part of their integrity management program. The frequency of these patrols is based on the western Canadian climatic cycle where increased hydrotechnical and geotechnical activity occurs during the annual spring freshet typically from March to June (depending on the specific watercourse catchment basin and local/regional climate). Geotechnical patrols are scheduled annually to precede spring freshet between July and November. Patrols are documented in excel workbooks, one for each of the 8 operating areas.
- **Supplemental Pipeline Right-of-Way Aerial Patrol and/or Field Reviews:**  
In the event of abnormal weather conditions such as a high precipitation event and/or an extreme freshet flood, supplemental pipeline right-of-way patrols may perform as described in the Geohazard Management Plan.



- **Ad Hoc Patrol:**

During their normal daily operations activities Spectra Energy Transmission employees check on the ROW they are working on or traveling past, these checks can include checking fenced facilities for signs of tampering and vandalism. These checks are documented on email if an issue is noted and entered into the work management system for resolution. The auditors reviewed emails presented as evidence.

Note: These types of patrols are not scheduled nor are there any written process or requirement documents. This is noted as non-compliance in appendix 2 under operational conditions.

- **Environmental Inspections:**

Spectra Energy Transmission conducts several types of environmental inspections within its environmental management program. These activities include:

- Facility site inspections: related to routine activities, focused on one or more operational areas within a facility
- Pipeline site inspections: focused on the transmission and gathering lines and their ancillary operations
- Follow-up inspections: review of previous inspections to verify the implementation of corrective actions
- Turnaround inspections: performed during turnaround activities at plants/facilities
- Permit and approval inspections: site specific inspections which main goal to ensure compliance to the approval and/or permits
- Project/ Construction Inspections: inspections related to projects and/or construction projects

These inspections are documented and the results are filed on a central network drive.

- **Cathodic protection survey:**

While the scope of this audit is limited to patrol activities, the Board notes that Spectra Energy Transmission has scheduled other activities in order to monitor its cathodic protection; it has retained contractors to undertake an annual corrosion survey.

- **Vegetation management survey:**

While the scope of this audit is limited to patrol activities, the Board notes that Spectra Energy Transmission has scheduled other activities in order to monitor its vegetation management; it has retained contractors to undertake an annual vegetation survey.

## **Conclusion**

Given the scope of the audit and the documents reviewed, the Board did not find any issues of non-compliance for this aspect of the requirement.



## **2.0 Evaluating adequacy and taking corrective action**

The Board requires companies to evaluate the adequacy and effectiveness of the protection programs and for taking corrective and preventive actions if deficiencies are identified. During the audit, the Board reviewed records of various types of patrol activities as part of its surveillance and monitoring program.

In cases where issues were noted on the reports, the Board noted that Spectra Energy Transmission demonstrated that potential unauthorized activities, Integrity, environmental and operational issues Spectra Energy Transmission had a processes for reporting, tracking, communicating and resolving these issues using data bases for collecting the information and software systems for tracking the issues to closure.

Interviews, document and record review determined that Spectra Energy Transmission is evaluating the effectiveness of its right of way patrol activities during quarterly management reviews and consistently tracking any issues to resolution.

### **Conclusion**

Given the scope of the audit and the documents reviewed, the Board did not find any issues of non-compliance for this aspect of the requirement.

## **1.1 Right of Way Patrols**

### **Regulatory Requirements**

DPR-O s. 16(b): The damage prevention program that a pipeline company is required to develop, implement and maintain under section 47.2 of the *National Energy Board Onshore Pipeline Regulations* must include ongoing monitoring of any changes in the use of the land on which a pipeline is located and the land that is adjacent to that land.

### **CSA Z662-15, Clause 10.6.1.1, Pipeline patrolling:**

Operating companies shall periodically patrol their pipelines in order to observe conditions and activities on and adjacent to their rights-of-way that can affect the safety and operation of the pipelines. Particular attention shall be given to the following:

- a) construction activity;
- b) dredging operations;
- c) erosion;
- d) ice effects;
- e) scour;
- f) seismic activity;
- g) soil slides;
- h) subsidence;
- i) loss of cover;
- j) evidence of leaks; and
- k) Unauthorized activities.

**CSA Z662-15, Clause 10.6.1.2:**

The frequency of pipeline patrolling shall be determined by considering such factors as

- a) operating pressure;
- b) pipeline size;
- c) population density;
- d) service fluid;
- e) terrain;
- f) weather; and
- g) Agricultural and other land use.

**NEB Assessment****Monitoring of adjacent lands (DPR-O)**

The *National Energy Board Damage Prevention Regulations – Obligations of Pipeline Companies* (DPR-O) requirements came into effect on 19 June 2016. The DPR-O requires that companies develop a Damage Prevention Program which includes ongoing monitoring of any changes in the use of the land on which a pipeline is located and the land that is adjacent to that land.

Spectra Energy Transmission did demonstrate that it has revised its patrol activities to account for the additional requirements outlined in the DPR-O s.16 (b). As part of its demonstration Spectra provided its class location management plan, SOP 7.2 Class Location Assessment and demonstrated through their GIS system that captures and documents changes in land use are according to the DPR requirements.

**Conclusion**

Given the scope of the audit and the documents reviewed, the Board did not find any issues of non-compliance for this aspect of the requirement.

**Observing conditions and activities (CSA clause 10.6.1.1)**

Spectra Energy Transmission's SOP *Lands Pipeline Right-of-Way Patrol* includes the list of CSA-Z662-15 conditions to pay attention to during patrols. Through a review of inspection reports, the Board confirmed that patrol reports were being generated after each patrol. A review of a sample of aerial patrol reports identified that these reports did not include confirmation that each of the CSA-Z662-15 clause 10.6.1.1 conditions and activities were being monitored or assessed during patrols.

This type of reporting by exception does not allow for any monitoring of developing trends that can affect the safety and operation of the pipeline nor does it document an assessment of the various potential issues.



## **Conclusion**

Due to the fact that the aerial patrols report by exception, that is, only noted when activity or an issue is present, Spectra Energy Transmission could not demonstrate that it is monitoring all the issues as noted in CSA Z662-15 clause 10.6.1.1.

Therefore, the audit determined that Spectra Energy Transmission is non-compliant with this requirement. The Board requires that a CAP be developed to address this non-compliance.

## **Frequency of inspections (CSA clause 10.6.1.2)**

Spectra Energy Transmission provided documentation related to its patrol activities and ROW maintenance standards. Spectra Energy Transmission's Pipeline standards, management plans and standard operating procedures (SOPs) describe frequency of patrols and any triggers that would require increasing or changing patrol frequencies.

Documents included :

- Class location management plan
- Pipeline Systems Integrity Management Plan
- Geohazard Management Plan Page
- SOP 7.1 section 3.0 Patrol Frequency
- Process Safety Management System

Spectra Energy Transmission was able to demonstrate that it has provided criteria for establishing its frequency of patrols. As it included all of the factors as listed in CSA Z662-15, Clause 10.6.1.2 requirements in the documents.

## **Conclusion**

Given the scope of the audit and the documents reviewed, the Board did not find any issues of non-compliance for this aspect of the requirement.



## 2.0 Reporting

### Regulatory Requirements

OPR s. 52 (1): A company shall immediately notify the Board of any incident relating to the construction, operation or abandonment of its pipeline and shall submit a preliminary and detailed incident report to the Board as soon as practicable.

DPR-O s. 7: Even if the condition set out in paragraph 13(1)(a) of the *National Energy Board Pipeline Damage Prevention Regulations – Authorizations* is met, when the operation of vehicles or mobile equipment across a pipeline at specific locations for the purposes of performing an agricultural activity could impair the pipeline's safety or security, the pipeline company must identify those locations and notify the following persons in writing of those locations:

- (a) landowners of the specific locations in question; and
- (b) persons that are engaged in agricultural activities rent or lease the land or work as service providers or employees at the specific locations in question.

DPR-O s. 11(1): The pipeline company must immediately report to the Board

- (a) every contravention of the *National Energy Board Pipeline Damage Prevention Regulations – Authorizations*;
- (b) all damage to its pipe caused or identified during the construction of a facility across, on, along or under a pipeline, the operation, maintenance or removal of a facility, an activity that caused a ground disturbance within the prescribed area or the operation of vehicles or mobile equipment across the pipeline; and
- (c) any activity related to the construction of a facility across, on, along or under a pipeline, an activity that caused a ground disturbance within the prescribed area or the operation of vehicles or mobile equipment across a pipeline that the pipeline company considers could impair the safety or security of the pipe.

### NEB Assessment

#### **Notification of locations regarding low risk agricultural activity (DPR-O s.7)**

In its 29 March 2011 submission to the Board that was required by the MO-21-2010, Spectra Energy Transmission reported that it had assessed all crossings and no locations were identified to cause issue.

For this audit, Spectra Energy Transmission provided its Pipe soil survey Worksheets. Also, Spectra Energy Transmission notes instances of exposed pipe discovered during its patrols activities. Spectra Energy Transmission was able to demonstrate that it had tracked these issues to resolution. Spectra Energy Transmission did demonstrate that it has a process for monitoring depth of cover on agricultural lands this is managed in the integrity management system through damage prevention program Spectra Energy Transmission provided Soil surveys and land use reports that would enable them to identify areas where low-risk agricultural activity would jeopardize the safety of the pipeline.

**Conclusion**

Given the scope of the audit and the documents reviewed, the Board did not find any issues of non-compliance for this aspect of the requirement.

**Reporting unauthorized activities (DPR-O s 11)**

Spectra Energy Transmission's SOP *Lands Pipeline Right Of Way* and the *Unauthorized Activity Internal Reporting Guideline* documents the procedures for reporting incidents and unauthorized activities to the Board.

Spectra Energy Transmission was able to demonstrate that it has a process in place to report instances of potential unauthorized activities. It also demonstrated that these unauthorized activities are documented and reported to the Board, communicated throughout the organization and tracked to resolution. Using "One Window Reporting" function on its intranet, Spectra Energy Transmission provides a single point-of-contact for reporting all regulatory reportable incidents and emergencies.

Through interviews and record review, the audit verified that Spectra Energy Transmission staff and contractors follow these procedures when they discover unauthorized activities on the ROW during patrols.

Spectra Energy Transmission also demonstrated that it is tracking, trending and reporting annually on the unauthorized activities to Senior Management in quarterly and annual reports and presentations.

Through document and record reviews and interviews in the regions, the Board confirmed that Spectra Energy Transmission staff were aware of the inspection and related reporting requirements particularly as they relate to potential mechanical damage from unauthorized third party activities.

**Conclusion**

Given the scope of the audit and the documents reviewed, the Board did not find any issues of non-compliance for this requirement.



**National Energy Board Pipeline Patrol Audit Protocol**  
**Appendix II – Pipeline Patrol interaction with other Management System**  
**sub-elements**

**1.0 POLICY AND COMMITMENT**

**1.1 Leadership Accountability**

**Expectations:** The company shall have an accountable officer appointed who has the appropriate authority over the company's human and financial resources required to establish, implement and maintain its management system and protection programs, and to ensure that the company meets its obligations for safety, security and protection of the environment. The company shall have notified the Board of the identity of the accountable officer within 30 days of the appointment and ensure that the accountable officer submits a signed statement to the Board accepting the responsibilities of their position.

Regulatory References: OPR 6.2(3), 6.3, 6.4.

**NEB Assessment**

The Accountable officer (AO) for Westcoast Energy Inc. carrying on business as Spectra Energy Transmission is Mr. Mark Fiedorek is president of Spectra Energy Transmission's western Canadian operations.

The AO roles and responsibilities are documented within the Spectra Energy Transmission's Operations Management System (OMS) The AO is to ensure the OMS is established, implemented and maintained in a systematic manner in accordance with internal and external requirements and that the necessary human and financial resources are provided.

This includes all the programs, process, and activities associated with 4.1 Inspection, Measuring and Monitoring.

**Conclusion:**

The audit verified that Spectra Energy Transmission has established the role of the Accountable Officer who has the responsibility and authority with respect to sub-element 4.1 Inspection, Measuring and Monitoring.

The audit verified that Spectra Energy Transmission has the policies to address the above expectations as they relate to inspection and monitoring. Based on the review conducted and considering the scope of this audit, the Board did not identify any issues of non-compliance in relation to sub-element 1.1- Leadership Accountability.





## 1.2 Policy and Commitment Statements

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

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

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

**References: OPR s 6.3 CSA 3.1.2 (a)**

### NEB Assessment

Spectra Energy Transmission Environmental Health and Safety policy drives the corporate initiatives that establish the Spectra Energy Transmission Operations Management System. The Spectra Energy Transmission Published Environmental Health and Safety policy states.

*"Spectra Energy highly values the health and safety of our employees, contractors, customers and communities. This Environmental, Health & Safety Policy establishes principles to protect and advance the corporation's essential interests and to fulfill our commitment to people and the environment. Protecting and responsibly managing natural resources are critical to the quality of life in the areas we serve, the environment and Spectra Energy's long-term business success".*

The principles referred to in the policy include accountabilities of Spectra Energy Transmission leadership, Stewardship, compliance to laws and regulations, performance and communication. The principles and the policy document is signed by the CEO of Spectra Energy Gregory L. Ebel President and Chief Executive Officer Spectra Energy and applies to All Spectra Energy business including Spectra Energy Transmission.

The Operations Management System (OMS) is the over-arching system that encompasses all Spectra Energy Transmission West Operations Programs. Its purpose is to:

- *Provide direction, governance, oversight and coordination to ensure we have a clear direction, opportunities are capitalized upon and we are doing the right things, at the right time*
- *Identify and manage significant operational risks including risks to achieving objectives for as Spectra Energy Transmission integrity and reliability, compliance, personal and process safety and environmental protection; and*
- *Assure compliance with all company policies, procedures, and all applicable codes and regulations.*



Patrols reside within multiple programs within the OMS the primary policies and responsibilities for the patrols are in the Lands & Pipeline Safety Awareness, the Integrity and the Environmental programs.

Spectra Energy Transmission policy for the Internal reporting of hazards, potential hazards, incidents and near misses is documented in the “General Employee Reporting Procedure” and the conditions under which a person who makes a report will be granted immunity from disciplinary action is documented in the “Non- Retaliation and NON Retribution Policy.”

### **Conclusion:**

The audit verified that Spectra Energy Transmission has the policies to address the above expectations as with respect to sub-element 4.1 *Inspection, Measuring and Monitoring*.

Based on the review conducted and considering the scope of this audit, the Board did not identify any issues of non-compliance in relation to sub-element 1.2 for Appendix II, Policy and Commitment.

## **2.0 PLANNING**

### **2.1 Hazards Identification, Risk Assessment and Control<sup>1</sup>**

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

The company shall have an established, implemented and effective process for the internal reporting of hazards, potential hazards, incidents, and near-misses and for taking corrective and preventive actions, including the steps to manage imminent hazards. The company shall have and maintain a data management system for monitoring and analyzing the trends in hazards, incidents, and near-misses.

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

**References OPR 6.5 (1)(c), (d),(e), 40, 47, 48**

**CSA Z662-15 clause 10.6.1, 10.6.2, 10.1,10.7**

**DPR-O s.7,9,10,11,16(b)(c)**

<sup>1</sup> 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



## **NEB Assessment**

### **Identifying Hazards and Potential Hazards and Inventory**

Spectra Energy Transmission provided a number of documented procedures related to hazard identification for review including:

- *Pipeline Integrity Management Program*
- *Damage Prevention Program.*
- *Geohazard Management Plan*
- *inventory of hazards and an evaluation Table 8.2*
- *Standard Operating Procedure 7.1 Lands Pipeline Right-of-Way Patrol*
- *ROW Patrol environmental issue flow chart*
- *ROW Patrol issue flow chart*
- *Ad Hoc Patrol issue flow chart*

The Standard Operating Procedure 7.1 Lands Pipeline Right-of-Way Patrol outlines how hazards and potential hazards are identified through periodic monitoring of the conditions and activities along its right of way through aerial patrols. The procedure makes reference to the various activities and conditions that “shall be given attention” that corresponds with the CSA Z662-11 clause 10.6.1.1. The procedure also lists specific activities and conditions that are monitored during aerial patrols.

Spectra Energy Transmission include processes for evaluating all programs including lands and damage prevention in its OMS overview, the integrity management program and the damage prevention program are applied to determine the effectiveness and drive changes to their programs.

Companies are required to have established, implemented and effective process for the internal reporting of hazards, potential hazards, incidents, and near-misses and for taking corrective and preventive actions, including the steps to manage imminent hazards. Spectra Energy Transmission uses software tracking process for issues. Called EPASS The system requires personnel to enter hazards, potential hazards, incidents and near-misses as they are identified. A review of patrol reports indicated that reports of unauthorized activity such as encroachments were being entered into the system from patrol reports.

### **Analysis of Hazards and Potential Hazards**

Spectra Energy Transmission provided documentation demonstrating that it had conducted an analysis of the occurrences of unauthorized activities reported on or near its ROW to senior management. According to the analysis, some of these occurrences were discovered during patrol activities.



In addition, Spectra Energy Transmission did demonstrate that hazard identification from other protection programs was informing the patrols. For example, although invasive species was identified as an environmental issue on the ROW, Spectra Energy Transmission did demonstrate that its staff and contractors conducting patrols were aware and trained to identify issues during patrols and report back.

### **Controls**

Based on the review of documents provided, the Board noted that Spectra Energy Transmission demonstrated that patrol activities are established as controls for hazards on the ROW. The audit found that Spectra Energy Transmission conducts frequent and various types of patrols, as discussed in Appendix I of this report.

### **Conclusion:**

The audit verified that Spectra Energy Transmission has the policies to address the above expectations as with respect to sub-element 4.1 *Inspection, Measuring and Monitoring*. The audit verified that Spectra Energy Transmission has the policies to address the above expectations as they relate to inspection and monitoring. Based on the review conducted and considering the scope of this audit, the Board did not identify any issues of non-compliance in relation to sub-element 2.1 Hazards Identification, Risk Assessment and Control.

## **2.2 Legal Requirements**

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

**References OPR 6.5(1) (g)(h)(i)**

### **NEB Assessment**

The process and the legal requirements are listed within the program documents and SOPs that are written and maintained by the subject matter experts. The Integrity, Damage prevention and Environmental Programs listed the regulatory and legal requirements associated with the Patrol programs.

### **Conclusion:**

The audit verified that Spectra Energy Transmission has the policies to address the above expectations as with respect to sub-element 4.1 *Inspection, Measuring and Monitoring*. The audit verified that Spectra Energy Transmission has the policies to address the above



expectations as they relate to inspection and monitoring. Based on the review conducted and considering the scope of this audit, the Board did not identify any issues of non-compliance in relation to sub-element 2.2 for Appendix II, Legal Requirements.

### **2.3 Goals, Objectives and Targets**

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

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

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

**References OPR sections 6.3, 6.5(1)(a), (b), 6.6  
CSA 3.1.2 (h)**

### **NEB Assessment**

Spectra Energy Transmission' Strategic Approach Charter governs the Operations Management System (OMS) which governs all programs that initiate or use data generated by patrols.

The goals, metrics and targets are developed for each program each program and has a scorecard of metrics that are tracked and monitored through the Operations Steering Committee (OSC). The metrics on the OSC Scorecard are a consolidation of metrics from various Program Scorecards.

Specific goals and objectives have been developed for Environmental stewardship, Integrity leaks and failures and Damage Prevention. Examples of Patrols targets such as the number of patrols that have been completed, unauthorized activities discovered and permits issued.

### **Conclusion:**

The audit verified that Spectra Energy Transmission has the policies to address the above expectations as with respect to sub-element **4.1 Inspection, Measuring and Monitoring**. Based on the review conducted and considering the scope of this audit, the Board did not identify any issues of non-compliance in relation to sub-element 2.3 Goals, Objectives and Targets.



## 2.4 Organizational Structure, Roles and Responsibilities

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

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

References: **OPR 6.3, 6.4, 6.5 (c)(j)(k)(l)**  
**CSA 3.1.2 (b)(c)**

### **NEB Assessment:**

Spectra Energy Transmission supplied the NEB with their overall structure in an organization chart and responsibilities were broken down in program overviews and job descriptions. The Lands and Pipeline Safety Awareness department is accountable for the aerial patrol program. The damage prevention department does not use contract employees to conduct regular patrols. Vacations and illness are handled within the departments and are covered by existing staff.

The environment and integrity programs are accountable for the geotechnical and vegetation management patrols. These patrols involve contract employees which are subject matter experts. Programs, plans and practices, human resource requirements are reviewed and evaluated annually during to ensure that workers are assigned to each management program component.

Any gaps that are identified are elevated to the Directors of each program. The human resource review is documented within the "*Resource Analysis*" tab within the Role Roster with the date of the review listed under the "Documentation and Revision History."

### **Conclusion:**

The audit verified that Spectra Energy Transmission has the policies to address the above expectations as with respect to sub-element **4.1 Inspection, Measuring and Monitoring**. Based on the review conducted and considering the scope of this audit, the Board did not identify any issues of non-compliance in relation to sub-element 2.4 Organizational Structure, Roles and Responsibilities.



### 3.0 IMPLEMENTATION

#### 3.1 Operational Control-Normal Operations

**Expectations:** The company shall have an established, implemented and effective process for developing and implementing corrective, mitigative, preventive and protective controls associated with the hazards and risks identified in elements 2.0 and 3.0, and for communicating these controls to anyone who is exposed to the risks.

The company shall have an established, implemented and effective process for coordinating, controlling and managing the operational activities of employees and other people working with or on behalf of the company.

**References OPR s.39,OPR s. 6.5(1)(e), (f), (q)  
CSA 3.1.2(f),10.6.1, 10.6.1.2,10.6.2**

#### NEB Assessment

The Spectra Energy Transmission Integrity, Environment and Lands & Damage prevention Departments are responsible for the Standard Operating Procedures (SOPs) for patrols and the patrol schedule. The Lands and Damage Prevention Department are responsible for the aerial patrols SOP. The frequency of Lands Patrols is determined by population density, urban development, foreign construction activity, etc. in the area of the pipeline ROW. Areas with higher third party activity are patrolled monthly or every other month.

All findings are recorded on a "Pipeline ROW Inspection Report". Reports are distributed as per the "ROW Inspection Distribution List" noted as an appendix in the SOP 7.1. In the event of a non-emergency situation that requires immediate attention, Team Leaders and appropriate Spectra Energy Transmission support staff, are notified as soon as possible and provided with details of the situation. The area Operations Team Leader will provide information to the area Planner/Scheduler so that a notification can be created in the Spectra Energy Transmission Work Management System to initiate and track the corrective actions identified during inspections.

As noted in appendix I the Spectra Energy Transmission relies on workers to continually monitor ROW during their daily activities (Ad Hoc patrols) this monitoring is not documented in an SOP or written into job requirements and through interviews and record review the auditors noted inconsistent monitoring practices.

#### Conclusion:

While Spectra Energy Transmission has demonstrated it has developed process and system requirements for majority of its patrols the board has determined that additional process and requirements need to be established and implemented for these (Ad Hoc patrols). As a result, the Board finds Spectra Energy Transmission in non-compliance with NEB OPR s. 6.5(1) (q). The Board requires Spectra Energy Transmission to develop a corrective action plan to address the described deficiencies.



### 3.2 Operational Control-Up Set or Abnormal Operating Conditions

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

**References OPR 6.5(1)(c )(d)(f)(t)  
CSA 3.1.2 f)ii, h)vi**

#### NEB Assessment

Section 4.0 of the SOP 7.1 Lands Pipeline Right-of-Way Patrol defines the hazards that would be considered abnormal conditions and emergencies. The section also outlines the immediate actions to be taken reporting requirements and mitigating measures.

Spectra Energy Transmission monitors weather conditions, land use changes, class changes, provincial emergency activities (Fire, flooding, earth movement...) If identified these activities can trigger changes or addition to the patrol schedule.

#### Conclusion:

The audit verified that Spectra Energy Transmission has the policies to address the above expectations as with respect to sub-element 4.1 *Inspection, Measuring and Monitoring*. Based on the review conducted and considering the scope of this audit, the Board did not identify any issues of non-compliance in relation to sub-element 3.2 Operational Control-Up set or Abnormal Operating Conditions

### 3.3 Management of Change

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

**References: OPR 6.5(1)(i)  
CSA3.1.2 (g)**

#### NEB Assessment

At Spectra Energy Transmission, changes to the patrol program or changes that the patrol program initiates are managed through the Operations Management System, Management of





Change (MOC) process. Spectra Energy Transmission provided the NEB with the MOC that was initiated and is being managed regarding changes in the Damage Prevention Regulations (June 2016). The Spectra Energy Transmission MOC process uses data capture software and preprogramed logic to ensure all elements of the MOC are addressed.

**Conclusion:**

The audit verified that Spectra Energy Transmission has the policies to address the above expectations as with respect to sub-element 4.1 *Inspection, Measuring and Monitoring*. Based on the review conducted and considering the scope of this audit, the Board did not identify any issues of non-compliance in relation to sub-element 3.3 Management of Change

**3.4 Training, Competence and Evaluation**

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

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

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

**References OPR s.6.5(1)(j), (k), (l), (p),46  
CSA 3.1.2(c)**

**NEB Assessment**

Spectra Energy Transmission policy requires only certified personnel are able conduct Lands patrols. Spectra Energy Transmission has developed a Computer based training module that is managed by their Learning Management System (called "Pipeline Monitoring Patrol Training" The course outline, worker training matrix and attendance records were supplied as evidence .

The Board noted during interviews and inspections employees who had taken the training course were knowledgeable regarding ROW patrols. Employees not trained but are actively monitoring the ROW as noted in sub-element 3.1 will be required to complete the training.

**Conclusion:**

The audit verified that Spectra Energy Transmission has the policies to address the above expectations as with respect to sub-element 4.1 *Inspection, Measuring and Monitoring*. Based on the review conducted and considering the scope of this audit, the Board did not identify any issues of non-compliance in relation to sub-element 3.4 Training, Competence and Evaluation

**3.5 Communication**

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

**References: OPR 6.5(l)(m)(q)**  
**CSA Z662 clause 3.1.2(d), g)(v)**

**NEB Assessment**

Spectra energy Transmission SOP 1.9 – Pipeline Integrity Communication Plan outlines communication of ROW and pipeline hazards and threats to internal and external stakeholders. This is used in conjunction with individual hazard management plans which outline the communication and management review requirements of individual hazards and associated activity.

Spectra Energy Transmission provided examples of communications that had been generated and implemented to both internal and external stakeholders.

**Conclusion:**

The audit verified that Spectra Energy Transmission the policies to address the above expectations relating to sub-element 4.1 *Inspection, Measuring and Monitoring*. Based on the review conducted and considering the scope of this audit, the Board did not identify any issues of non-compliance in relation to sub-element 3.5 Communication.

**3.6 Documentation and Document Control**

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

The company shall have an established, implemented and effective process for preparing, reviewing, revising and controlling documents, including a process for obtaining approval of the



documents by the appropriate authority. The documentation should be reviewed and revised at regular and planned intervals.

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

**References OPR 6.5(1)(i),(n),(o), 6.5(3)  
CSA 3.1.2 (e)**

### **NEB Assessment**

The Board expects to have an established, implemented and effective process for identifying the documents required for the company to meet its obligations to conduct activities in a manner that ensures the safety and security of the public, company employees, the pipeline, and protection of property and the environment.

The documents generated by the patrols are managed according to the Spectra Energy Transmission SOP 1.2 "Documents Management." The SOP requires specific approvals, ownership, revision, retention, MOC, and location storage.

The documents reviewed for the Patrols audit were all following the requirements specified in the SOP.

### **Conclusion:**

Based on the review conducted and considering the scope of this audit, the Board did not identify any issues of non-compliance in relation to sub-element - 3.6 Documentation and Document Control.

## **4.0 CHECKING AND CORRECTIVE ACTION**

### **4.1 Inspection, Measurement and Monitoring**

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

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

The company shall have an established, maintained and effective data management system for



monitoring and analyzing the trends in hazards, incidents and near-misses. The company shall have documentation and records resulting from the inspection and monitoring activities for its programs.

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

**References OPR s. 6.1(d), 6.5(1)(g), (s), (u), (v), (w), (x), 56  
CSA 10.6.1, 10.6.1.2, 10.6.210.7 (class location  
DPR-O s.16(b)**

**This sub-element is assessed in Appendix I**

#### **4.2 Investigations of Incidents, Near-misses and Non-compliances**

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

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

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

**References: OPR s. 6.5(1)(r), (s), (u), (w), (x), 52  
DPR-O s.11**

#### **NEB Assessment**

SOP 7.1 – Lands and Pipeline ROW Patrol – outlines the role and requirements of the patroller when reporting hazards, potential hazards, incidents and near-misses that are discovered during patrols. Examples provided include immediate direction and notification requirements for urgent or emergencies. Employees were able to describe the reporting process and follow up requirements when asked during interviews.

Patrollers may also investigate events such as unauthorized crossings and encroachment. Other subject matter experts may be involved in investigations such as integrity issues, security and safety.



Spectra Energy Transmission utilizes EPASS, a software tracking process for issues and event reporting, investigations and corrective action tracking. A separate data base is used for tracking unauthorized crossings and a work management database ensures action items are addressed.

Spectra Energy Transmission provided records including investigations into unauthorized activities, geo-hazard events and environmental cleanup as evidence that the process were established and implemented.

**Conclusion:**

The audit verified that Spectra Energy Transmission the policies to address the above expectations as with respect to sub-element 4.1 *Inspection, Measuring and Monitoring*. Based on the review conducted and considering the scope of this audit, the Board did not identify any issues of non-compliance in relation to sub-element 4.2 Investigations of Incidents, Near-misses and Non-compliances.

**NEB Assessment**

SOP 7.1 – Lands and Pipeline ROW Patrol – outlines the role and requirements of the patroller when reporting hazards, potential hazards, incidents and near-misses that are discovered during patrols. Examples provided include immediate direction and notification requirements for urgent or emergencies. Employees were able to describe the reporting process and follow up requirements when asked during interviews.

Patrollers may also investigate events such as unauthorized crossings and encroachment. Other subject matter experts may be involved in investigations such as integrity issues, security and safety.

Spectra Energy Transmission utilizes EPASS, a software tracking process for issues and event reporting, investigations and corrective action tracking. A separate data base is used for tracking unauthorized crossings and a work management database ensures action items are addressed. Spectra Energy Transmission provided records including investigations into unauthorized activities, geo-hazard events and environmental cleanup as evidence that the process were established and implemented.

**Conclusion:**

The audit verified that Spectra Energy Transmission the policies to address the above expectations as with respect to sub-element 4.1 *Inspection, Measuring and Monitoring*. Based on the review conducted and considering the scope of this audit, the Board did not identify any issues of non-compliance in relation to sub-element 4.2 Investigations of Incidents, Near-misses and Non-compliances.



### 4.3 Internal Audit

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

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

**References OPRs.6.1, 6.5(1)(w), (x), 40, 47, 48  
CSA 3.1.2 h(v)(vi)(vii)**

#### NEB Assessment

Spectra Energy Transmission provided a SOP Pipeline integrity program internal audit and a draft of the internal audit directive that had not been implemented. The SOP described a process to evaluate compliance to regulations and standards that would include activities in the patrols program. Spectra Energy Transmission did not provide any evidence that the audits evaluating the patrol program had been done.

#### Conclusion:

Spectra Energy Transmission could not demonstrate that it has conducted any audits that included Patrols to determine whether its patrol activities are adequate or effective. As a result, the Board has determined that Spectra Energy Transmission is non-compliant with NEB OPR Section 6.5(1) (w). The Board requires Spectra Energy Transmission to develop a corrective action plan to address the described deficiencies.

### 4.4 Records Management

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

**References OPR s 6.1, 6.5(1)(p), 40, 47, 48  
CSA 3.1.2 (e) , 10.4.4.1**

#### NEB Assessment

The records generated by the patrols are managed according to the Spectra Energy Transmission records management retention rules. A comprehensive list and location of documents and records that support the Pipeline-IMP is provided in SOP 1.2 "Documents Management."



Throughout the audit, Spectra Energy Transmission provided examples of records of patrols, incidents and investigations that followed the policies and process Spectra Energy Transmission by the SOP and the retention rules.

**Conclusion:**

The audit verified that Spectra Energy Transmission the policies to address the above expectations as with respect to sub-element 4.1 *Inspection, Measuring and Monitoring*. Based on the review conducted and considering the scope of this audit, the Board did not identify any issues of non-compliance in relation to sub-element 4.4 - Records Management

## 5.0 MANAGEMENT REVIEW

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

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

**References: OPR sections 6.1, 6.5(1)(w), (x), 6.6, 40, 47, 48  
CSA 3.1.2 (h)(vii)**

**NEB Assessment**

Spectra Energy Transmission conducts management reviews in accordance with its OMS Procedure and is detailed in the Strategic Approach document. OMS leadership's roles and responsibilities.

*“NEB Management System Annual Report Review meeting (once per year – February/March)”*

The purpose of this meeting is review the performance of the company's management system and enables the Accountable Officer to sign an annual report for the previous calendar year. The programs accountable for the patrols are included in this review.



Spectra Energy Transmission provided the Q1 and Q2 2016 Quarterly Status Reports for the OMS programs including Damage prevention. These reports summarized the program status on goals, objectives, targets, performance measures, results year to date and trends of the performance measures.

Spectra Energy Transmission also submitted its 2015 NEB Annual Report notification for the Spectra Energy Transmission (28 April 2016) signed by the Accountable Officer. This notification confirming the completion of the report.

**Conclusion:**

The audit verified that Spectra Energy Transmission has a process for conducting management reviews as it relates to sub-element 4.1 and has provided documentation of management reviews for all OMS programs. Based on the review conducted and considering the scope of this audit, the Board did not identify any issues of non-compliance in relation to sub-element 5.0 - Management Review.



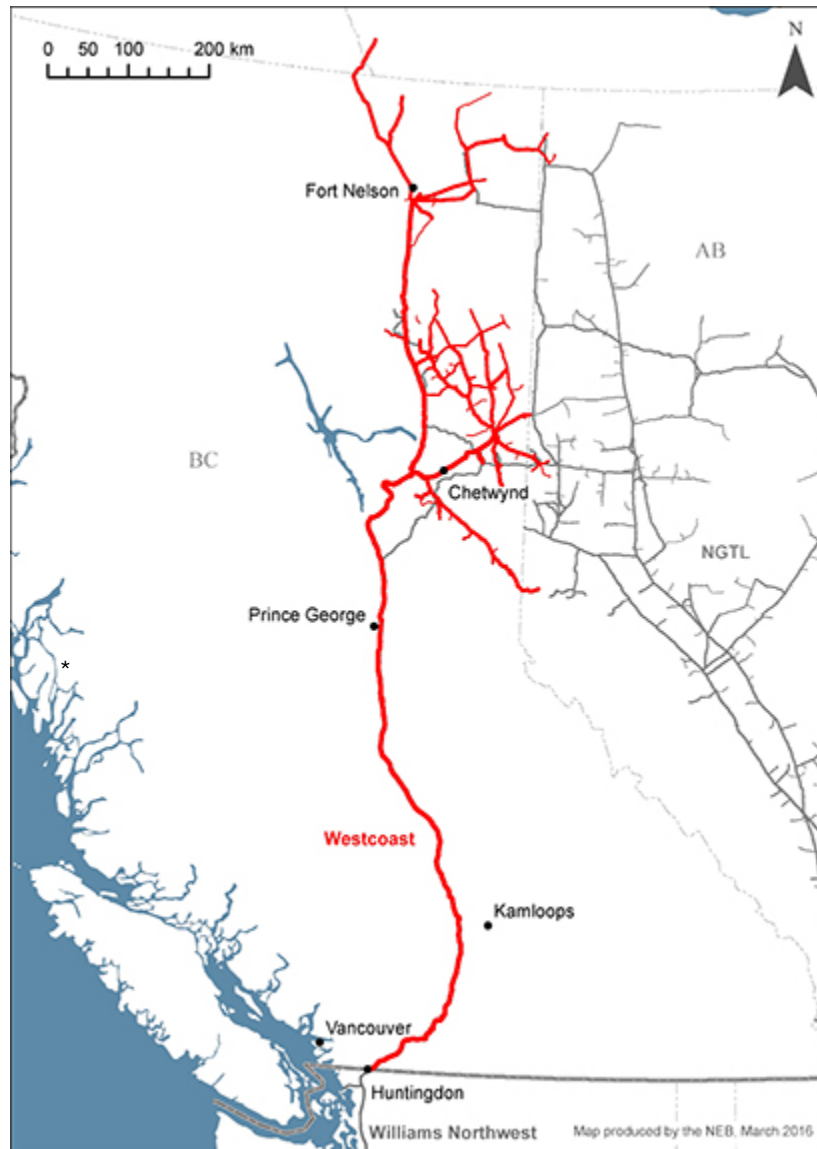
**APPENDIX III**  
**WESTCOAST ENERGY INC., CARRYING ON BUSINESS AS SPECTRA ENERGY**  
**TRANSMISSION**  
**MAPS AND SYSTEM DESCRIPTION**

Westcoast Energy Inc., carrying on business as Spectra Energy Transmission, owns the Westcoast Transmission System (Westcoast). Westcoast extends from points in Yukon, the Northwest Territories, Alberta and BC, to the Canada-U.S. border near Huntingdon, BC. At the border Westcoast connects to Williams Northwest Pipeline, which supplies natural gas to the U.S. Pacific Northwest.

Westcoast's transmission system is composed of two parts:

- T-North which is north of Station 2 just west of Chetwynd (deliveries to NGTL and T-South)
- T-South south of Station 2 (deliveries to BC Lower Mainland and the Huntingdon export point).
  - o T-North connects to NGTL at two points: Nova Gordondale and Sunset/Groundbirch. Westcoast's gathering and processing system, which is regulated by the Board under the Framework for Light-handed Regulation, is also shown on the map.

- **Figure 1:**



## APPENDIX IV

Westcoast Energy Inc., carrying on business as Spectra Energy Transmission

### COMPANY REPRESENTATIVES INTERVIEWED

Company Representative Interviewed	Job Title
[REDACTED]	Sr. Geotechnical Tech
[REDACTED]	Geotechnical Technologist
[REDACTED]	Corrosion Technologist
[REDACTED]	Lands Manager
[REDACTED]	Technician 4
[REDACTED]	Director Land
[REDACTED]	Manager Damage Prevention
[REDACTED]	Team Leader Pipeline Central
[REDACTED]	Technician 4
[REDACTED]	Principal Geotechnical Eng
[REDACTED]	CanW Pipeline Ops
[REDACTED]	Team Leader Pipeline South
[REDACTED]	Director Integrity
[REDACTED]	Land and Community Rep
[REDACTED]	Land and Community Rep
[REDACTED]	Team Leader Environ Pgm & Supp

## APPENDIX V

### Westcoast Energy Inc., carrying on business as Spectra Energy Transmission Documents and records reviewed.

Geohazard Management Plan.pdf
Corrosion Management Plan.pdf
2.7 Cathodic Protection Surveys.pdf
30 inch Fort Nelson Mainline(FNL1)_36 inch Fort
Nelson Mainline(FNL2).xlsm
2016 Pipe2 Soil Survey - Stn 6a to Stn 6b.xlsm
2016 Pipe2 Soil Survey - Stn2 to Stn 2B.xlsm
Spectra Trans, Pine River Gas Plant, Comp Maint, Mar 2016 Letter.pdf
Crane parked on pipeline at 86th St..msg
Fraser Valley_2016-01-25.pdf Fraser Valley_2016-02-23.pdf Fraser Valley_2016-06-27.pdf
Incident Express Notification # 32844 SETW -Miscellaneous.msg
Incident Express Notification # 32854 SETW - Miscellaneous.msg
June 9, 2016 pipeline patrol [northbound].pdf
June 27, 2016 pipeline patrol [southbound].pdf
June28_29_ROW_Inspection_Report.pdf
NEB's Event Reporting System - Final Event Report UX2015-159 Submitted.msg
NEB's Event Reporting System - Final Event
Report UX2016-093 Submitted.msg
NEB's Event Reporting System - Final Event
Report UX2016-094 Submitted.msg
Sample Work Orders Re Geotechnical Patrols.pdf
BC pipeline 2015 IPMP june10-15.pdf
Job Description LCR_Final.pdf
Pipeline Patrol Training.msg

Pipeline Patrol Training Aug 2016_v1.pdf
EHS Risk Assesment.pdf
Helicopter Operating Standard v2013 08 29.pdf Helicopter Services Draft Questionnaire V8.xlsx Helicopter Services Success Factors and Mandate ver 5 .xlsx
2 Vehicle Equipment Forms.PDF
Land use_09_08_2016_10_42_23_961.pdf
land use_09_08_2016_10_42_44_788.pdf
PI Charter (rev 2).pdf
EM Charter-2016.pdf
DP_Charter_20160303_Final.pdf
SET West Pipeline Systems Integrity Management Program (rev6.0) .pdf
Pipeline Patrol Training Aug 2016_v1.pdf
Field_Guide_to_Noxious_Weeds_Final_WEB_09-25-2014.pdf
ExcavationReportTemplate.dot
Class Location Management Plan.pdf
1.11 Pipeline Integrity Plan Internal Audit.pdf
AO Q1-Q2 Mgmt. Review - DP Program v2016-06-27.pdf
3 3 9_ Incident Learning Prevention_2015_KPW_V1.docx.pdf
3 4 2 - EHS Data Collection and Reporting Protocol_2014-08-18_MLB_expanded TOC.pdf al
SET West One Window Reporting Procedure OneWindowReportingProcedure.pdf
SAOMSLeadershipRolesRespProcesses.pdf
7.1 Appendix 1 ROW Inspection Report -Copy.pdf
7.1 Appendix 2 ROW Inspection Distribution List- LCR - v8-CB_KG.pdf

7.1 Lands Pipeline ROW Patrol final.pdf
Pipeline Patrol Training.msg
SASCharter.pdf
Introduction to the OMS and OMS Manual.pdf
RMOC - DPR's.pdf
Lands Org Chart.pdf
EHSS Compliance Inspection FNGP 2016.pdf
EHSS Compliance Inspection FNNPF 2016.pdf
EHSS Compliance Inspection Highway 2016.pdf
EHSS Compliance Inspection Kobes.pdf
EHSS Compliance Inspection Laprise.pdf
EHSS Compliance Inspection Aitken Creek2016.pdf
EHSS Compliance Inspection Buick Creek.pdf
EHSS Compliance Inspection Jedney 2016.pdf
EHSS Compliance Inspection McMahon.pdf
EHSS Compliance Inspections Rigel.pdf
EHSS Compliance Inspection - Form.pdf
LCR Roles and Responsibilities.pdf
Dealing with Public Conflict Wallet
Card_2015_03_10.pdf
Pembina Patrol Report Template.xls
Geo corrected Ortho photo program description.pdf
ROW Patrol issue flow chart.pdf
Ad Hoc Patrol flow chart.pdf
SW 6A km 5.6 env insp July 2016.pdf
Geohazard Plan (rev0) Sept 9 2016.pdf
Geotech ROW Patrol finding flow chart.pdf

FW Juliet Rectifier Graffiti.msg
Patterson Rd Crossover Site.msg
RE fencing.msg
Signage.msg
Environmental Management Program Standard Operating Procedure
CAN-WEST-EM-INSP-SOP-INSP-02.pdf
SET_West_DP_Program_Rev 6 - May2014.pdf
DP OMS Program Development Plan 2016-08-15.xlsx
Aerial Patrol Reports 2015 and 2016 and
Unauthorized Activity Tracking 2016 evidence.docx
Aerial Patrol Reports 2015 and 2016
Unauthorized Activity Tracking 2016 evidence.docx
EHS_Policy_Ebel_2014-04-21.pdf
Manage Inspections KPI.pdf
RAC Audit Directive Draft.pdf