

National Energy
Board



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National Energy Board Processing Plant Regulations (PPR)
Final Audit Report
for Integrity Management, Safety, Environmental Protection
and Emergency Management Programs

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Canada

Executive Summary

As part of its compliance verification program, the National Energy Board (NEB or Board) conducted an audit of Westcoast's Integrity Management, Safety, Emergency Management and Environmental Protection Programs (Programs) as they apply to Westcoast's McMahon Processing Plant. These Programs, and their content, are required to be developed under the *National Energy Board Act* (NEB Act), Canada Labour Code (CLC) and associated regulations.

The Board regulates a number of gas processing plants operated by Westcoast. The audit conducted at the McMahon Processing Plant is part of the Board's overall strategy for verifying regulatory compliance, safety and environmental protection across all of Westcoast's gas processing plants. The Board is aware that Westcoast's gas processing plants utilize common management structures and procedures to manage processes and activities that are specific to each plant. The Board, therefore, requires that any non-compliant findings related to the common procedures and practices will be addressed and mitigated at other locations in addition to addressing the issues within the McMahon Processing Plant.

The audit identified that Westcoast is undertaking to manage and control the hazards associated with its gas processing plant processes and activities. The audit did, however, identify a number of non-compliant findings. In reviewing and analyzing the Westcoast audit results as a whole, it appears that the majority of the non-compliant findings relate to Westcoast's lack of formal, proactive and systematic identification, review and management of its legal requirements, and its safety and environmental hazards, across its Programs. The audit identified that the majority of hazards had been included in Westcoast's procedures and practices; however, these hazards were primarily identified by Westcoast staff either through personal knowledge or in the operating permits issued by other regulatory bodies, rather than through required systematic reviews and assessment processes. This has resulted in Westcoast being unable to demonstrate that its Programs are compliant.

The Board notes that within the management system elements of its audit protocols there are conceptual linkages between sub-elements. As a result, a finding of non-compliance in a particular sub-element may necessarily result in multiple findings of non-compliance within each Program area. This is particularly evident in this audit due to Westcoast's non-compliant hazard identification and assessment practices. The Board has identified each of the linked sub-element findings to assist Westcoast in implementing all necessary corrective actions to its Programs to ensure safety management and environmental protection.

In its audit, the Board identified that Westcoast has developed an internal Operations Management System (OMS) that could be used to meet the Board's requirements if it was modified as per the audit findings. The OMS, as demonstrated, however, is not being applied consistently within and across the various Programs.

While all non-compliant findings are of concern to the Board, the Board is particularly concerned with Westcoast's non-compliance with sections 50, and 52 through 54 of the PPR. These provisions are considered by the Board to be key requirements for safety management as they require companies to demonstrate that adequate numbers of competent staff are available to

safely operate and maintain each gas processing plant. The Board expects that Westcoast will develop and implement a corrective action plan (CAP) for expeditiously addressing all non-compliances.

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1.0 Introduction: NEB Purpose and Framework

The NEB's corporate purpose is to promote safety and security, environmental protection, and efficient energy infrastructure and markets in the Canadian public interest within the mandate set by Parliament in the regulation of pipelines, energy development and trade.

The NEB's PPR came into force on 30 January 2003. To evaluate compliance with its regulations, the NEB undertakes audits of its regulated companies. Following the audits, companies are required to submit and implement a CAP to address and mitigate all findings of non-compliance. The results of the audits are applied to the NEB's risk-based life cycle approach to compliance planning.

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

2.0 Audit Terminology and Definitions

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

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

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

Process: A systematic series of actions or changes taking place in a definite order and directed towards a result.

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

Finding: The evaluation or determination of the adequacy of programs or elements in meeting the requirements of the NEB Act, its associated regulations, and Part II of the CLC.

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.

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 must be developed and implemented.

Compliant with Recommendation: An opportunity to improve practices or to change practices that are currently in compliance but have the potential, based on professional judgement, to lead to non-compliance. A corrective action does not have to be developed.

3.0 Background

Westcoast holds the certificate and the assets for the Westcoast pipeline system, which is owned and operated by Spectra Energy. Spectra Energy has ownership of several different pipeline systems in Canada and the United States. With respect to the Westcoast pipeline system only, Spectra Energy sometimes refers to itself as Spectra Energy Transmission West, Spectra Energy Transmission BC or Spectra Energy BC Pipeline and Field Services. As such, the job titles of employees interviewed, as well as the titles of documentation reviewed, reflect these variations.

The Westcoast pipeline system is comprised of both pipeline and gas processing facilities, as shown on Figure 1. This PPR audit included an assessment of Westcoast's Programs in relation to its McMahon Processing Plant located in Taylor, British Columbia (BC), which was utilized for purposes of field verification. The Board however, regulates a number of gas processing plants operated by Westcoast, and therefore, the audit in respect of the McMahon Processing Plant is part of the Board's overall strategy for verifying regulatory compliance, safety and environmental protection across all of Westcoast's processing plants. The Board is aware that Westcoast's gas processing plants utilize common management structures and procedures to manage processes and activities that are specific to each plant. The Board, therefore, requires that any non-compliant findings related to the common procedures and practices will be addressed and mitigated at other all other Westcoast processing plants regulated by the Board in addition to the McMahon Processing Plant.

4.0 Audit Objectives and Scope

The scope of the audit included the four Programs, which have been developed and implemented for processing plants to meet the regulatory requirements of:

- the NEB Act;
- PPR;
- CLC Part II;
- *Safety and Health Committees and Representatives Regulations* made under Part II of the CLC;
- *Canadian Occupational Health and Safety Regulations (COHSR)* made under Part II of the CLC; and
- Westcoast's policies, programs, practices and procedures.

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

5.0 Audit Process

Audit Activities, Locations and Dates
<ul style="list-style-type: none"> • Audit Notification Letter – 22 September 2010 • Audit Opening Meeting (Charlie Lake, BC) – 25 November 2010 • Document and Records Review (Calgary, AB) – 16-20 January, 2011 • Head Office Interviews (Calgary, AB; Charlie Lake, BC; Vancouver, BC) – 31 January, 2011; 7-10 February 2011; 10-17 March 2011; 30 March 2011. • Field Verification of all Programs: <ul style="list-style-type: none"> ○ McMahon Gas Plant (Taylor, BC) - 14 March 2011 • Audit Pre-Close-Out Meeting (Charlie Lake, BC) – 17 July 2011 • Final Close-Out Meeting (Calgary, AB) – 16 October 2012 • Draft Audit Report Issued 7 December 2012 • Westcoast comments submitted on 31 December 2012 and 16 January 2013

The Board chose to audit Westcoast by utilizing a risk-based approach that included a review of previous compliance history. By letter dated 22 September 2010, the Board notified Westcoast of its intent to conduct an audit. On 25 November 2010, an opening meeting was conducted with representatives from Westcoast in Charlie Lake, BC, to discuss the objectives, scope and process of the audit; and to initiate the development of a schedule for conducting the site visits and staff interviews.

Daily debriefs were held at the end of each day of both head office interviews and field verification, to communicate issues to Westcoast representatives. On 17 July 2011, Westcoast was presented with the preliminary results of the audit at an Audit Pre-Close-Out Meeting, and was given an opportunity to present the Board's auditors with any supplementary information to consider in respect of identified non-compliances. Westcoast was also given additional time to provide supplementary information between the Audit Pre-Close-Out Meeting and the Final Close-Out Meeting, held on 16 October 2012.

The Final Close-Out Meeting was conducted at Westcoast's offices in Calgary, where the results of the audit, including an outline of the draft audit non-compliances, were presented to Westcoast. At that time, staff invited Westcoast to provide any documentation that may have been developed in the period between the Audit Pre-Close-Out Discussion and Final Close-Out Meeting that may mitigate, or negate, any non-compliances. No additional information was provided to the Board, and Westcoast did not contest any of the Board's findings as they were presented.

The Board's Draft Audit Report was issued on 7 December 2012. On 31 December 2012 and 16 January 2013, Westcoast submitted comments on the Draft Audit Report. These comments were reviewed by the Board and have been addressed, where appropriate, in the appendices.

For a list of Westcoast representatives interviewed, refer to Appendix V. For a list of documents and records reviewed, refer to Appendix VI.

6.0 Audit Results – Summary by Program Area

The audit identified a number of findings across the Programs that were evaluated. A summary of the findings in each Program area is as follows:

Integrity Management Program

From a technical perspective, Westcoast demonstrated that it has a reasonably well developed and implemented Integrity Management Program (IMP) for the McMahon Processing Plant. The Spectra Energy BC Pipeline and Field Services Pressure Equipment Integrity Management Program adequately focuses on the requirements for a Risk Based Inspection methodology for the higher risk pressure vessels; however, as noted in Appendix I under sub-element 2.1 - Hazards Identification, Risk Assessment and Controls, the pressure piping program has been less rigorously implemented. From a management system perspective, Westcoast has not met the Board's expectations for a complete, robust and fully implemented IMP. Of particular note were the non-compliances with respect to management system sub-elements of 4.4 - Internal Audit and 5.1 - Management Review.

Review of the non-compliant sub-elements and Westcoast's IMP, as implemented, indicates that the deficiencies generally do not reflect a complete system failure in any area. The audit identified that Westcoast's IMP includes and mitigates the majority of its hazards. The Board is therefore of the opinion that, during the development and implementation of the required corrective actions, any potential risks of these non-compliant sub-elements can be mitigated by the planning and processes currently in place.

For the specific details associated with the audit assessment of the management system elements of the IMP, refer to Appendix I: Westcoast Integrity Management Program Audit Evaluation Table.

Safety Program

Westcoast demonstrated that it has an established Environmental, Health and Safety Management System (EHS MS) with many elements and processes that allow for continual improvement. The EHS MS contains procedures for identified work tasks typically encountered by Westcoast personnel. Westcoast holds various meetings and completes reports which monitor and document the EHS MS safety component. Westcoast has also implemented a record retention process which includes: appropriate types of records to be retained; retention and disposition timeframes; and disposal methods.

Although Westcoast's EHS MS has many of the elements required in a management system, Westcoast has not met the Board's expectations for a complete, robust and fully implemented Safety Program. The Board finds the non-compliances associated with PPR sections 50 and 54 to be significant as these sections are considered to be key requirements for safety management, as they require companies to demonstrate that adequate numbers of competent staff are available to safely operate and maintain each processing plant. The Board expects that Westcoast will develop and implement corrective actions for addressing these non-compliances in an expedient manner.

For the details associated with these deficiencies please refer to Appendix II: Westcoast Safety Program Audit Evaluation Table.

Environmental Protection Program

The audit of Westcoast's Environmental Protection (EP) Program for the McMahon Processing Plant revealed a number of non-compliant areas. The non-compliant sub-elements generally appear to be related to one of two basic deficiencies: a lack of formal and systematic procedures for the identification and evaluation of all legal requirements, as well as its environmental hazards and aspects; and a lack of professional environmental resources for the development and implementation of the EP Program. As noted in Appendix III, non-compliances resulting from these deficiencies in one sub-element have resulted in non-compliances in other sub-elements that are closely linked in terms of their content.

Review of the non-compliant sub-elements and Westcoast's EP Program, as implemented, indicates that the deficiencies identified generally do not reflect a complete system failure in any area. The audit identified that as a result of its focus on permit conditions, Westcoast's EP Program includes and mitigates the majority of its hazards and aspects. The Board is therefore of the opinion that, during the development and implementation of the required corrective actions, any potential risks of these non-compliant sub-elements can be mitigated by the planning and processes currently in place.

For the details associated with the assessment of the management system elements of the EP Program, refer to Appendix III: Westcoast Environmental Protection Program Audit Evaluation Table.

Emergency Management Program

Review and analysis of the results of the audit of the Emergency Management (EM) Program for the McMahon Processing Plant indicated that, while there are a number of non-compliant findings assigned, Westcoast has a well-developed EM Program. The Board was able to view documents and records that demonstrated Westcoast is ensuring that its staff, and potentially involved agencies, public and mutual aid partners are appropriately informed and/or trained.

With the exception of the finding associated with sub-element 3.7 - Operational Control – Upset or Abnormal Operating Conditions, the non-compliant findings are related to the formality of the development and implementation of company-wide management system procedures. During the audit, however, Westcoast EM staff demonstrated that many of the deficient program requirements were being undertaken on a less formal basis by the EM staff. With respect to sub-element 3.7, the deficiency identified by the Board relates not to a lack of identification and mitigation of each individual hazard, but to the need for development of site specific emergency scenarios and corresponding response plans, including any specific local coordination which may be needed, to address potential hazardous chain-reactions. The Board is of the opinion however that, during the development and implementation of the required corrective actions, any potential

risks of these non-compliant sub-elements can be mitigated by the planning and processes currently in place.

For the details associated with the assessment of the management system elements of the EM Program, refer to Appendix IV: Westcoast Emergency Management Program Audit Evaluation Table.

7.0 Conclusions

The audit identified that Westcoast is undertaking work to manage and control the hazards associated with its facilities, processes and activities. Notwithstanding this, the audit identified a number of non-compliant findings. In reviewing and analyzing the audit results as a whole, it appears that the majority of the non-compliant findings relate to Westcoast's lack of formal, proactive and systematic identification, review and management of its legal requirements, and its safety and environmental hazards across its Programs. The audit identified that the majority of hazards had been included in Westcoast's procedures and practices; however, these hazards were primarily identified by Westcoast staff either through personal knowledge or in the operating permits issued by other regulatory bodies, rather than through required systematic reviews and assessment processes. This has resulted in Westcoast being unable to demonstrate that its Programs are fully compliant. With respect to these findings, the Board is of the view that the processes presently used by Westcoast have identified the majority, and most significant, of its hazards and risks. The Board is of the view that the hazards not presently accounted for should not create a significant potential hazard during the development and implementation of a CAP to address the deficiencies.

The Board has made non-compliant findings related to the lack of compliance with PPR sections 50, and 52 through 54. These provisions outline requirements for companies to audit and evaluate their Programs, as well as the competency of their staff and facility staffing levels to ensure and demonstrate protection of workers, the public and the environment. During the audit, Westcoast was unable to demonstrate that it had undertaken any of the evaluations or reporting required by these provisions, and its staff was unable to demonstrate knowledge of the regulatory requirements of these provisions. The Board finds the non-compliances associated with sections 50 and 54 to be significant as these sections are considered to be key requirements for safety management, as they require companies to demonstrate that adequate numbers of competent staff are available to safely operate and maintain each processing plant. The Board expects that Westcoast will develop and implement corrective actions for addressing these non-compliances in an expedient manner.

Westcoast is required to develop and implement corrective actions to address all non-compliances noted in a timely manner.

8.0 Audit Findings Table

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

1.0 Policy and Commitment

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

These elements and sub-elements are arranged to match standard management system elements to aid in the evaluation of the requirements. The Programs were audited against each of these elements and sub-elements. The detailed findings of these assessments are provided in the audit evaluation tables appended to this Final Audit Report. A summary of these results is presented in the Westcoast Audit Findings Table that follows.

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

9.0 Abbreviations

CAP: Corrective Action Plan

CLC: *Canada Labour Code Part II*

COHSR: *Canada Occupational Health and Safety Regulations*

Compliant (rec): Compliant with Recommendation

EHS MS: Environment, Health and Safety Management System

EM: Emergency Management

EP: Environmental Protection

IMP: Integrity Management Program

NEB: National Energy Board

OMS: Operations Management System

PPR: *National Energy Board Processing Plant Regulations*

RBI: Risk-Based Inspection

SET: Spectra Energy Transmission

Westcoast: Westcoast Energy Inc., Carrying on Business as Spectra Energy Transmission

APPENDIX I
WESTCOAST ENERGY INC., CARRYING ON BUSINESS AS SPECTRA ENERGY TRANSMISSION (WESTCOAST)
INTEGRITY PROGRAM AUDIT EVALUATION TABLE

1.0 POLICY AND COMMITMENT

1.1 Policy and Commitment Statements

Expectations: The company shall have a policy approved and endorsed by senior management (the Policy). It should include goals and objectives and commit to improving the performance of the company.

References:¹

Integrity:

National Energy Board Processing Plant Regulations 2003 (PPR SOR/2003), section 41

Assessment:

The “Spectra Energy BC Pipeline and Field Services Pressure Equipment Integrity Management Program” (PEIM) dated June 30 2008, Section 1.0, Management Statement states the SET West integrity related Policy and Commitments to the PEIM. The Vice President, [REDACTED] has endorsed this “Commitment Statement” and has given authority and responsibility to implement the PEIM program. This statement gives Senior Management the directive to follow the PEIM program to comply with the Policy and to meet all applicable regulatory requirements.

In addition, SET West Operations has recently embarked on an initiative for Process Safety Management (PSM) endorsed by Doug Bloom, President and CEO of SET West. The PSM brochure sets out the Objectives, Leadership Expectations and PSM Guidance for Leaders.

Based on documents reviewed and interviews with senior Management, Westcoast was able to demonstrate that it was in compliance with audit sub-element 1.1 Policy and Commitment Statements.

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

<p>Compliance Status: Compliant</p>
<p>2.0 PLANNING</p> <p>2.1 Hazards Identification, Risk Assessment and Controls²</p> <p>Expectations: The company shall be able to demonstrate a procedure to identify all possible hazards. The company should assess the degree of risk associated with these hazards. The company should be able to support the rationale for including or excluding possible risks in regard to its Integrity Management Program. The company should be able to implement control measures to minimize or eliminate the risk.</p>
<p>References:</p> <p><u>Integrity:</u> PPR SOR/2003 sections 10, 11, 18, 19, 21, 22, 25, 34, 40 and 41</p>
<p>Assessment:</p> <p>Appendix B of the PEIM commits to follow the American Petroleum Institute (API 510 Pressure Vessel Inspection Code), API 570 (Pressure Piping Code) and API 576 (Inspection of Pressure relieving Devices). While these inspection codes historically require time-based inspections, they also provide for the use of Risk-Based Inspection (RBI) methodology to determine inspection frequencies. Westcoast has chosen to use the RBI approach that is allowed by code. The following assessment details Westcoast’s RBI methodologies.</p> <p>A document titled “Westcoast Energy Inc., McMahon Facilities Inspection Management Guideline (IMG)” dated June 1999 contains the following:</p> <ul style="list-style-type: none"> • methods and philosophies employed in structuring the inspection management criteria; • explanations of the rationale used in assigning risk code values; • identification of the key issues related to failure mechanisms within the McMahon Processing Plant (McMahon) operating facilities. <p>More specifically, the IMG contains: Section 3; Methodology Employed, Section 4; Inspection Risk Code (IRC) Assignments with</p>

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

Section 4.1; Predictability, Confidence and Probability, Section 4.2; Consequence of Failure, Section 5; Assessment of Risks and Inspection Requirements, Section 6.1; Nondestructive On-Stream Inspections and Section 6.2; Off-Stream (Visual Inspections).

Attachment B of the IMG contains the details of 38 corrosion/degradation mechanisms, commonly referred to as “hazards”, that could be applicable to equipment located in the McMahan facilities. Attachment C then details the failure mode predictions which are characterized within 39 assigned corrosion circuits applicable to the McMahan gas processing plant. Each of these failure mode characterizations further identifies typical compositions, deterioration modes and preferred locations of corrosion Monitoring Locations (CML’s) and recommended CML monitoring frequencies.

Westcoast performs a risk assessment on each piece of pressure equipment using the following methodologies:

Determine the probability of failure ranking by:

- the probability of the failure mode/damage mechanism in one of 10 probability categories;
- the predictability of the failure occurrence and how well one might predict and measure that particular damage mechanism; and
- the confidence in the inspection information,

which then results in a Net Probability for a combination of all applicable damage mechanisms. That probability value is then plotted on the Y axis of the Risk Code Matrix.

Determine the consequence of failure by:

- the release rate that would result from the damage mechanism(s);
- the release volume from the release type and the time it may take to detect and stop or contain the release;
- the toxicity / harm that could affect personnel and/or public;
- the flammability of the product being released;
- the environmental impact; and
- the business impact,

which then results in a Net Consequence value derived as a total of the safety, environment and business impact. This value is plotted on the X axis of the Risk Code Matrix.

The resultant Risk Code Matrix (Attachment A of the IMG) determines the IRC which in turn identifies the inspection interval for both on-stream (external) and off-stream (internal) types of inspections. These intervals range from 3 to 60 months for on-stream and 12 to 120 months for off-stream inspections.

Westcoast has implemented the Metegrity Visions enterprise software program (Visions™) to manage, analyze and document all of the facility equipment and inspection data. Visions™ is also used to perform the RBI analysis and record the results.

Westcoast performs turn-arounds at each facility every three years. Westcoast's integrity group has the responsibility for reviewing and updating the RBI data for each piece of pressure equipment and scheduling the required inspections that are required during the turn-around, although on-stream inspections can be performed at any time.

While the Westcoast pressure vessel and tank integrity program adequately identifies the hazards and has implemented inspection and repair programs to mitigate the risks, its pressure piping program lacks the same degree of rigor. Although damage mechanisms have been identified for piping circuits, the on-stream Thickness Monitoring Location (TML) inspection program could be improved. For example, the piping associated with the raw water cooling has moderate to severe external corrosion. While the risk to this piping circuit is low due to the product (fresh water) and pressure (60 psi), there is no evidence of recent TML measurements to keep track of the extent of the corrosion. NEB auditors recommend that for this, and similar circuits, that the minimum pipewall thickness be calculated and then perform UT measurements on the worst locations of external corrosion so that a failure (likely leak versus rupture) could be prevented.

Additionally, there is no evidence that geotechnical hazards, in the form of earthquakes, have been identified or assessed. The 2005 Seismic Hazard Map from the Geological Survey of Canada and Natural Resources Canada has identified the area around the McMahan Processing Plant (Longitude -120.72, Latitude 56.31) as an active earthquake zone. From 1992 to 2004, there were 10 earthquakes documented with magnitudes ranging from 3.6 to 5.4 MN. The potential hazard of earthquakes on pressure vessel, pressure piping and tanks should be considered and the risks determined so that the need for a mitigation or monitoring program can be determined.

Based on documents reviewed and interviews, Westcoast was not able to demonstrate that it has a program to identify all its hazards and associated risk and to mitigate the risk appropriately.

Compliance Status: Non-Compliant

2.2 Legal Requirements

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

References:Integrity:

PPR SOR/2003 sections 2, 3, 5 and 41

Assessment:

The SET-West PEIM, Section 5 Regulatory Requirements, states that PLFS designs, constructs, operates, maintains and decommissions all of its pressure equipment in accordance with the requirements of the Canadian Standards Association (CSA) Boiler, Pressure Vessel and Piping Code (CSA B51-09), the PPR SOR/2003 and the applicable provincial regulatory Safety Codes, Acts and regulations. Appendix B references standards and codes applicable to and referenced within the PEIM. These include:

- Canadian Occupational Health and Safety Regulations – COHSR Part V
- PPR SOR/2003
- Canadian Standards Association (CSA) Standard B51-09, Boiler, Pressure Vessel and Pressure Piping Code
- API 510 - Pressure Vessel Inspection Code – Maintenance Inspection, Rating Repair and Alteration
- API 570 - Pressure Piping Code – Inspection, Repair, Alteration and Re-rating of In service Piping Systems
- API 576 - Inspection of Pressure Relieving Devices
- ASME Boiler and Pressure Vessel Code – Section I – Power Boilers
- ASME Boiler and Pressure Vessel Code – Section IV – Rules For Construction of Heating Boilers
- ASME Boiler and Pressure Vessel Code – Section V – Non-destructive Examination
- ASME Boiler and Pressure Vessel Code – Section VIII – Pressure Vessels (Div 1 and Div 2)
- ASME Boiler and Pressure Vessel Code – Section IX – Welding and Brazing Qualifications
- ASME B31.1 – Power Piping
- ASME B31.3 – Process Piping
- National Board Inspection Code – NBIC NB – 23

However, there are additional industry codes and standards that have not been listed in Appendix B. Westcoast relies on RBI methodology and there is no reference to the API RBI standards, among others considered critical to the RBI process. These include:

- API RP 580 Risk-Based Inspection
- API RP 581 Risk-Based Inspection Technology
- API RP 571 Damage Mechanisms Affecting Fixed Equipment in the Refining Industry
- API RP 572 Inspection Practices for Pressure Vessels
- API RP 573 Inspection of Fired Boilers and Heaters
- API RP 574 Inspection Practices for Piping System Components
- API Std 579-1/ASME FFS-1 Fitness-For-Service
- API RP 577 Welding Inspection and Metallurgy
- API Std 653 Tank Inspection, Repair, Alteration, and Reconstruction

1 Westcoast has incorporated and referenced API standards in its PEIM and has chosen to use the RBI option allowed by API 510 and API 570. However, Westcoast has not referenced in its PEIM the other API standards that should be used when applying RBI methodologies (e.g., API 580 and 581) that indicate how to implement such RBI. Without referencing the above-noted list of standards, the appropriate approaches to use when implementing RBI methodologies may not be followed.

In any situation where a RBI methodology is selected over the prescriptive inspection frequency set out in API 510 and 570, it is important that all standards critical to the RBI process be incorporated. As Westcoast does not incorporate all of the required legal references in its PEIM that it deems to be important (given that it has chosen to use the RBI method over the prescriptive inspection frequency noted in other standards), its PEIM is not considered adequate with respect to this sub-element related to legal requirements.

Compliance Status: Non-Compliant

2.3 Goals, Targets and Objectives

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

<p>References:</p> <p><u>Integrity:</u> PPR SOR/2003 section 41</p>
<p>Assessment:</p> <p>Through interviews with senior management and front line integrity staff it was apparent that Westcoast has established goals and objectives with respect to the performance of its integrity management program. Documents reviewed include annual management oversight meetings, company presentation material and integrity related budget items. In addition, the description of accountabilities in the PLFS Pressure Equipment Integrity Management Program document supports the infrastructure for achieving these goals and objectives.</p> <p>Based on documents reviewed and interviews with operations staff, Westcoast was able to demonstrate that it was in compliance with audit sub-element 2.3 Goals, Targets and Objectives.</p>
<p>Compliance Status: Compliant</p>
<p>3.0 IMPLEMENTATION</p> <p>3.1 Organizational Structure, Roles and Responsibilities</p> <p>Expectations: The company shall have an organizational structure that allows its management and protection programs to effectively function. The company should have clear roles and responsibilities, which may include responsibilities for the development, implementation and management of the management and protection programs.</p>
<p>References:</p> <p><u>Integrity:</u> PPR SOR/2003 sections 32, 41 and 50</p>
<p>Assessment:</p> <p>Section 6 of the PLFS Pressure Equipment Integrity Management Program details the accountabilities for the program, including: President, [REDACTED]</p> <p>[REDACTED]</p>

hierarchy. 16 organization charts received from the SET West “Source” supported the organizational structure and the roles and responsibilities for the development, implementation and management of the integrity program.

Westcoast was not able to demonstrate compliance with respect to Organizational Structure. Under the NEB PPR, companies are required to “prepare and keep current a report setting out the number of employees necessary to operate its processing plant safely and the competencies required for each position.” Westcoast’s management was unable to demonstrate that this report had been generated at any time since the promulgation of the NEB PPR in 2003. Senior staff interviewed were unaware of this safety requirement.

Based on documents reviewed and interviews with operations staff, Westcoast was not able to demonstrate that it was in compliance with audit sub-element 3.1 Organizational Structure, Roles and Responsibilities.

Compliance Status: Non-Compliant

3.2 Management of Change (MOC)

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

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

References:

Integrity:

PPR SOR/2003 section 41

Assessment:

Westcoast provided the MOC rev 1.7 Document dated 2010-11-02 which outlines a consistent approach for Field operations to ensure changes to assets are appropriate and that the process is documented to comply with all regulatory requirements. The MOC process outlines the triggers for invoking this process and the accountabilities and responsibilities of various departments and personnel to ensure that changes are evaluated for all aspects to ensure that no new or additional hazards are being created with a specific change for any discipline.

However, during interviews at the McMahon Processing Plant, it was discovered that changes to the cathodic protection (CP) system in the plant, such as alterations, upgrades or additions to the groundbeds, were not considered to be an MOC item. This was due to the fact that the CP system did not fall under any “asset manager” at the McMahon Processing Plant. Due to the complexity and potential impact to existing plant facilities (such as underground piping) any alterations to the CP system should be considered in Westcoast’s MOC process. The situation of the CP system upgrades falling outside the MOC process could likely occur when Westcoast follows the recommendation from the Probe CP survey of 2010 for upgrades and new installations to the McMahon Processing Plant CP system.

A document reviewed (NCR Summary 10/02/2011) cited several instances of non compliances that were MOC related. These include NCR 40 and 41 related to out of specification material being used on piping drains; NCR 169 regarding gauge glass drain piping not constructed to code; NCR 458 and 459 regarding small bore piping installed which was not in accordance with Westcoast piping specifications; and NCR 226 where a hydrogen bake out was not completed for a baffle repair (replacement bracket being welded onto the shell). While these NCR’s have been addressed and completed, they illustrate a gap in the MOC process that allowed them to occur.

Westcoast demonstrated that it has a formal process and dedicated staff for managing changes to its assets. However, Westcoast’s MOC process, as demonstrated, is not considered compliant as it applies only to physical (asset) changes and not to changes required in practices or procedures that could result from:

- changes to legal requirements;
- changes to industry standards or practices;
- the identification of new hazards; or
- results of monitoring, inspections or investigations.

Further, Westcoast’s MOC process only manages changes on a reactive basis (i.e., changes once the need has been identified). The Board expectation is that company MOC processes be proactive and formally linked to processes for the identification of changes that could affect the management and protection programs (e.g., Integrity Management, Safety, Environmental Protection, Emergency Management Programs, etc.).

Compliance Status: Non-Compliant

3.3 Training, Competence and Evaluation

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

References:

Integrity:

PPR SOR/2003 sections 12, 15, 33, 41, 44, 50 and 54

Assessment:

Westcoast's staff training consists of identification of critical tasks related to job positions and its suite of standard operating practices. The PLFS Pressure Equipment Integrity Management Program, Section 11.0; Competency and Training, defines the required competency and training of personnel who perform work and impact the effectiveness of the Integrity Management Program. This includes employees and contract personnel. Staff training processes are being more formally developed and implemented within Westcoast. For its contract personnel, Westcoast hires personnel who are deemed to be qualified and competent for the positions and tasks within their scope of work. Documents reviewed for its inspection contractor, Acuren, confirmed that the personnel were qualified in the various NDE techniques being used and to the API 510 requirements, and an assessment of the actual competency of Acuren personnel was checked during site inspections at the McMahon Processing Plant turnaround. Westcoast has relied on ISNetworld for additional contractor qualification; however ISNetworld does not ensure a contractor's technical qualifications.

Westcoast has not reviewed or approved some of the contractor procedures, such as the contractor Probe for the CP system monitoring or data analysis.

Based on documents reviewed and interviews with operations staff, Westcoast was not able to demonstrate that it was in compliance with the requirements of audit sub-element 3.3 Training, Competence and Evaluation.

Compliance Status: Non-Compliant

3.4 Communication

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

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

References:

Integrity:

PPR SOR/2003 sections 9, 15, 29, 33, 39, 46 and 47

Assessment:

Westcoast has an extensive network of communication processes, including regular management meetings and reviews for NCR's, incidents, MOC items and the status of projects. The technical personnel connected to the integrity program have a formal network from other gas plants who meet regularly. This community of practice discusses issues and shares learnings. Westcoast personnel attend the International Pressure Equipment Association (IPEA) conferences where industry practices and current knowledge on issues are shared. All of these informal lines of communications are driven by the participants and informal expectations.

However, a formalized, documented communications plan has not been developed by Westcoast and it is required that Westcoast more formally document its various communications practices.

Based on documents reviewed and interviews with operations staff, Westcoast was not able to demonstrate that it was in compliance with the requirements of audit sub-element 3.4 Communication.

Compliance Status: Non-Compliant

3.5 Documentation and Document Control

Expectations: The company should have documentation to describe the elements of its management and protection programs- where warranted. The documentation should be reviewed and revised at regular and planned intervals. Documents should be revised

immediately where changes are required as a result of legal requirements or where failure to make immediate changes may result in negative consequences. The company should have procedures within its management and protection programs to control documentation and data as it relates to the risks identified in element 2.0.

References:

Integrity:

PPR SOR/2003 sections 9, 30 and 41

Assessment:

The primary document with respect to the integrity program is the Westcoast Energy Inc, McMahan Facilities Inspection Management Guideline. It is dated June 1999. The document does not contain a section that identifies the document owner or the catalogue of revisions with dates and signed authority for revisions. It contains the methodologies employed for the risk based inspection process (RBI) and is of particular importance because Westcoast has opted to use the RBI approach to alter the inspection frequencies otherwise prescribed by API 510. Given that this document is 11 years old, it should have been updated to include any Westcoast or industry learnings with respect to risk based inspection. The PLFS Pressure Equipment Integrity Management Program document, revised June 30, 2008, Section 7; Documentation and Data Control, subsection 7.1.1 specifies that the Manager, Plant Integrity has the following responsibilities: owner of the PEIM document; coordinate and complete all changes to the document; conduct review of the PEIM document; ensure all documents referenced in this manual are maintained, relevant and current. Appendices A, B and C of the PEIM document still contain the word “Draft” despite the latest revision date being June 30, 2008. The McMahan Facilities Inspection Management Guideline does not meet Westcoast’s internal documentation and data control requirements.

Based on documents reviewed and interviews with operations staff, Westcoast was not able to demonstrate that it was in compliance with the requirements of audit sub-element 3.5 Documentation and Document Control.

Compliance Status: Non-Compliant

3.6 Operational Control-Normal Operations

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

References:Integrity:

PPR SOR/2003 sections 10, 18, 19, 28, 29, 30, 31, 34, 41, 44 and 50

Assessment:

Westcoast has developed a program to identify hazards and to proactively implement mitigative and preventive measures to address those hazards identified. Westcoast relies on a risk-based methodology for pressure equipment inspection and repair and coordinates the inspection frequencies with the gas plant turnaround schedule where pressure equipment outages are required for the inspection. The current turnaround schedule is once every three years. The inspection frequencies, as determined by RBI, are entered into the Visions software and then into Systems Applications and Products (SAP) for scheduling. On stream, external inspections are also entered into Visions and SAP for scheduling and tracking completion.

SET West's BC Pipeline and Field Services Pressure Equipment Integrity Management Program (PEIMS) document contains the following sections which address operational control – normal operations: Section 8: Design Control, Section 9: Construction and Installation of Pressure Equipment, Section 10: Purchasing and Material Control, Section 12: Operations, Section 13: Management of Change, Section 14: Integrity Assessment, Section 15: NDE and Testing, and Section 16: Overpressure Protection and Protective Devices.

While the integrity program for pressure vessels and tanks is rigorous, well-defined and maintained, the integrity program for pressure piping is less so. It requires examination, assessment and improvement such that the caliber of the program more closely matches that of the pressure vessel inspection program.

In the internal audit conducted by Westcoast, there were numerous non-conformances noted with respect to overdue inspections, but these were primarily a function of the three year turnaround schedule. However, there are NCR's still outstanding for the Pressure Safety Valves (PSV) of the propane bullets. While there was verbal communication as to the rationale for the delay in inspecting the PSV's, there was no formal documentation on record to substantiate the delay. There was verbal assurance that a capital project is planned to correct the piping configuration that prevents on stream inspection of the PSV's but the lack of formal documentation on the status and future inspection requirements for critical equipment (PSV's) can have a negative impact on the operational controls.

Based on documents reviewed and interviews with operations staff, Westcoast was not able to demonstrate that it was in compliance with the requirements of audit sub-element 3.6 Operational Control-Normal Operations.

Compliance Status: Non-Compliant

3.7 Operational Control-Upset or Abnormal Operating Conditions

Expectations: The company shall establish and maintain plans and procedures to identify the potential for upset or abnormal operating conditions, accidental releases, incidents and emergency situations. The company shall also define proposed responses to these events and prevent and mitigate the likely consequence and/or impacts of these events. The procedures must be periodically tested and reviewed and revised where appropriate (for example, after emergency events).

References:

Integrity:

PPR SOR/2003 sections 15, 17, 18, 20, 21, 22, 25 and 47

Assessment:

In terms of abnormal or upset conditions, the McMahon Processing Plant relies on the use of pressure safety valves or pressure relieving devices (PSV's or PRD's) to release the pressure and prevent vessel or pressure piping overpressure. These PSV's are under a prescribed service interval and Section 16 of the PLFS Pressure Equipment Integrity Management Program details the requirements for inspection, servicing and replacement of PRD's. Section 15 of the program covers the NDE and testing requirements and control of monitoring and measurement devices. In conjunction with Westcoast's Emergency Management Program (covered under a separate discipline in the PPR audit – see Appendix IV), Westcoast has programs in place to identify and control potential upset or abnormal operating conditions.

Other than the bullet PSV overdue inspection covered in sub-element 3.6 above, through documents reviewed and interviews with operations staff, Westcoast was able to demonstrate that it was in compliance with the requirements of audit sub-element 3.7 Operational Control-Upset or Abnormal Operating Conditions.

Compliance Status: Compliant

4.0 CHECKING AND CORRECTIVE ACTION

4.1 Inspection, Measurement and Monitoring

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

References:

Integrity:

PPR SOR/2003 sections 10, 29, 40, 41, 52 and 53

Assessment:

Westcoast's integrity management program for pressure equipment has a well-developed and implemented surveillance and monitoring program, except as where previously noted improvements were required for pressure piping. The legal requirements of API 510 for pressure vessels are being met and adequately address the hazards and risks associated with the damage mechanisms expected for the pressure vessels. Inspection results are incorporated back into the risk assessments immediately following the turnaround inspections and inspection frequencies are adjusted where required in a proactive approach to their surveillance and monitoring program. Inspection results and repair disposition documentation and records are transferred to the Visions program to ensure continuity, completeness and ready access.

As discussed previously in sub-element 2.1, Westcoast's inspection program for pressure piping has not been maintained with the same rigor as the pressure vessel inspection and monitoring program.

Based on documents reviewed and interviews with operations staff, Westcoast was not able to demonstrate that it was in compliance with the requirements of audit sub-element 4.1 Inspection, Measurement and Monitoring.

Compliance Status: Non-Compliant

4.2 Corrective and Preventive Actions

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

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

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

References:

Integrity:

PPR SOR/2003 sections 41, 47 and 52

Assessment:

Westcoast has defined a process to investigate and follow up on incidents and to deal with any non-compliances that occur. During the 2008 turnaround, there were a number of instances where the scheduled inspection was cancelled by the management team and rescheduled for the 2011 turnaround. These, however, still produced a non-compliance on their records. All non-compliances resulting from the delayed 2008 inspections were dealt with during the 2011 turnaround.

The non-compliance resulting from delayed inspection of PSV's on the propane storage bullets (NCR 529, 530, 531, 532 and 533) are expected to be corrected with a capital project to modify the piping and PSV locations such that they can be serviced without a major disruption in the propane bullets. The lack of formal documentation of these non-compliances has been discussed in sub-element 3.6 of this audit report, but the situation still constitutes a non-compliance in this sub-element of the audit report.

All non-compliances are reviewed periodically at the management level to ensure that they are being addressed in a timely manner and do not create an unacceptable level of risk for the McMahon Processing Plant operations, its personnel and the environment.

Based on documents reviewed and interviews with operations staff, Westcoast was found not to be in compliance with the requirements and expectations of audit sub-element 4.2 Corrective and Preventive Actions.

Compliance Status: Non-Compliant

4.3 Records Management

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

References:

Integrity:

PPR SOR/2003 sections 39, 40, 41 and 55

Assessment:

Westcoast uses the Visions software program extensively to maintain the tombstone data, risk analyses, inspection and disposition records of its pressure vessel integrity program. These records are retained, accessible and maintained and their retention meets the requirements of all applicable legislation, regulation and standards.

Based on documents reviewed and interviews with operations staff, Westcoast was found to be in compliance with the requirements and expectations of sub-element 4.3 Record Management.

Compliance Status: Compliant

4.4 Internal Audit

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

References:

Integrity:

PPR SOR/2003 sections 41 and 52

Assessment:

Westcoast has had an audit performed on the performance of its integrity management program. It was however a performance audit, not a compliance or technical audit. The NCR Summary report (66 pages) identified non compliances resulting from this audit. While the recent internal audit had merit with respect to IMP performance measures, section 52 of the PPR SOR/2003 states that “a company shall conduct audits and inspections on a regular basis to ensure that its processing plant is designed, constructed, operated or abandoned in compliance with ... these regulations.” The performance audit conducted, as such, does not meet the requirements of section 52 of the PPR SOR/2003.

Based on documents reviewed and interviews with operations staff, Westcoast was not able to demonstrate that it was in compliance with the requirements of audit sub-element 4.4 Internal Audit.

Compliance Status: Non-Compliant

5.0 MANAGEMENT REVIEW

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

References:

Integrity:
PPR SOR/2003 sections 41

Assessment:

Westcoast’s management meets regularly to review the performance of its Integrity Management Program and assess, through results, the continued adequacy and effectiveness of the program. These management meetings are formal and documented. While the Board acknowledges formal review of the IMP by Westcoast senior management, based on the non-compliances identified, the Board is not satisfied that management review has been undertaken with a view to ensuring the IMP’s continuing suitability, adequacy and effectiveness.

In terms of the IMP meeting all of the legislative requirements, Westcoast/SET West senior management oversight has failed to ensure that all requirements are met, as indicated in this audit report. As such, the management review should be revised and improved to

include all aspects of the requirements of the PPR under their oversight.

Based on the preceding documentation review and interviews with operations staff, Westcoast was not able to demonstrate that it was in compliance with the requirements of audit sub-element 5.0 Management Review.

Compliance Status: Non-Compliant

APPENDIX II
WESTCOAST ENERGY INC., CARRYING ON BUSINESS AS SPECTRA ENERGY TRANSMISSION (WESTCOAST)
SAFETY PROGRAM AUDIT EVALAUTION TABLE

1.0 POLICY AND COMMITMENT	
1.1 Policy and Commitment Statements	
Expectation: The company shall have a policy approved and endorsed by senior management (the Policy). It should include goals and objectives and commit to improving the performance of the company.	
References: ³	
PPR SOR/2003 Section 13	Canada Labour Code (CLC) Part II 125(1)(d)(i)-(ii), 125(1)(z.09)
Assessment:	
Westcoast has an Environment, Health and Safety (EHS) Policy which has been approved and adopted by Spectra Energy Transmission's president and chief executive officer. The EHS Policy serves as the foundation for all Spectra Energy Transmission (Westcoast) activities by establishing a clear vision of EHS performance shared by the organization. The EHS Policy has been defined by senior management to demonstrate Westcoast's commitment to the protection of the environment, and the health and safety of its employees.	
The EHS Policy is applicable throughout the EHS Management System (MS), which has been designed and implemented to ensure the five principles (Accountability, Stewardship, Standards, Performance and Communication) of the EHS Policy are achieved on a day-	

³ Each "Reference" in this table contains specific examples of the "legal requirements" applicable to each element but are not necessarily a complete list of all applicable legal requirements.

to-day basis.

Compliance Status: Compliant

2.0 PLANNING

2.1 Hazards Identification, Risk Assessment and Control⁴

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

References:

PPR SOR/2003 Sections
11, 13, 18, 19(c), 22, 26,
27, 29(3), 30, 31, 33(a),
47 and 49

CLC Part II
125.(1)(s)(z.03)-(z.05),
125(1)(z.13)-(z.16)

Canada Occupational
Health and Safety
Regulations, SOR/86-
304, (Canada Labour
Code) (COHSR) 19.1(1),
19.3(1)-(2), 19.5(1)-(5)

Assessment:

Document review determined that Westcoast has an established EHS MS. In 2009, Westcoast expanded its EHS MS to include a Hazard Management Program (HMP) which includes an Occupational Exposure Management Program as well as a task hazard analysis mechanism. The HMP also includes the development of a Critical Task Analysis Risk Evaluation Tool, a Workplace Exposure Assessment and Control Lists. The Critical Task Analysis Risk Evaluation Tool has been implemented at the Pine River and Fort Nelson Processing Plants.

⁴ 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

The HMP involves characterizing and ranking the relative risk of worker and/or company hazards for all Westcoast Similar Exposure Groups (SEG). SEGs are groups of workers that have the same general exposure profiles because of the similarity and frequency of the tasks they perform, the materials and processes with which they work, and the similarity in the way they perform the tasks. SEGs are broken down by: (1) operating area; (2) job description; and (3) job tasks and job tasks that also include contractors.

A Westcoast standard is in place for each critical practice (e.g., working at heights, lockout/tag out, ground disturbances, confined space and sour work). The Westcoast Critical Practice Standards are reviewed by the Health and Safety Department every three years to ensure supervisors and workers receive relevant job-specific training. According to Westcoast staff, the goal of critical practice standards is to allow staff to develop the ability and skill to see beyond the usual concerns of any given task into possible side effects and consequences. Westcoast has integrated this program training requirement for each critical practice along with recommended training tracked in Westcoast's Learning Management System (LMS).

The S.L.A.M. (Stop; Look; Assess; Manage) Program was implemented at the McMahon Processing Plant Turnaround (June 2011) to incorporate feedback for improvements. When the improvements are completed, the S.L.A.M. Program will be integrated into all Westcoast Operations.

Westcoast has developed a Self-Assessment Program. This program includes an updated inspection form available on the Westcoast intranet site, the Source, which directs the observer to assess area conditions rather than assess specific hazards. A corrective action plan is also included with the updated form. Local Area Leadership delivered presentations on the program and updated EHS inspection forms to the National Energy Board's (Board) auditors.

Westcoast has developed and implemented a Violence Prevention in the Workplace Policy and Program. Westcoast employees receive Violence Prevention In the Workplace as well as EHS training when they are first hired and annually thereafter.

Westcoast's Contractor EHS Management Standard provides guidance for the registration, selection and oversight of all contractors performing work for Westcoast. Westcoast contracts ISNetwork (ISN) to manage contractor pre-qualification. Westcoast has developed criteria for the pre-screening of contractors. The information requested from each contractor is used to evaluate general safety abilities. Safety information collected includes a contractor's Total Injury Frequency Rate (TFR), company Health and Safety Manual, safety citations from a regulatory body, and Worker's Compensation Board (WCB) rate sheets and WCB clearance letters. Safety manuals are reviewed by a third party, to help eliminate the perception of bias. ISNetwork is not used to determine contractor training competency. Upon completion of the contract, the contractor's performance is reviewed and documented.

The northeast BC region is an active zone for seismic activity. (Data from Earthquakes Canada, Natural Resources Canada: 2008-03-04, M=3.3 near Fort St. John, BC; 2008-04-22, M=3.1 near Fort St. John, BC; 2009-08-15, M=3.4 - 92 km NWN of Fort St. John, BC felt; and 2009-06-14, M=3.5 - 80 km WNW of Fort St. John, BC - felt). The 2005 Seismic Hazard Map from the Geological Survey of

Canada and Natural Resources Canada has identified the area around the McMahon Processing Plant (Longitude -120.72, Latitude 56.31) as an active earthquake zone. From 1992 to 2004, there were 10 earthquakes documented with magnitudes ranging from 3.6 to 5.4 MN.

In reviewing the components of Westcoast's hazard identification assessment and control strategy for worker safety, Westcoast was not able to demonstrate that it has completed and documented a hazard identification, risk assessment and control procedure to address the risks created by seismic activity for its assets and infrastructure, including the McMahon Processing Plant NGL bullets.

Compliance Status: Non-Compliant

2.2 Legal Requirements

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

References:

PPR SOR/2003
 Sections 1, 2, 3, 4, 5, 6, 7,
 8, 9(1), 10, 15(1)(c), 27,
 29(1)(2), 31, and 50

CLC Part II 125(1)(v) COHSR 19.1(1)

Assessment:

Westcoast has an EHS regulatory monitoring process for health and safety regulation changes. The EHS Regulatory Change Monitoring Process was implemented 29 September 2009. Westcoast contracts Templegate Information Services Inc. a subscription service for tracking legal initiatives and recent legal decisions (e.g., federal and provincial environmental initiatives, federal and provincial Occupational Health and Safety (OHS) initiatives, international initiatives, standards initiatives, other legal initiatives and recent legal decisions).

Although Westcoast's Confined Space Entry training reflects the provincial Work Safe BC legislation, Westcoast is federally regulated. The federal regulations require staff to be trained to CLC Part II confined space entry standards. The Westcoast EHS MS

Manual requires the review and evaluation of contractor health and safety work and communication plans, developed in advanced of work, to ensure they are appropriate to the risks of the work and ensure functional area integration for Federal and Provincial OHS requirements to ensure conflicts do not exist.

A review of Westcoast safety training is required to ensure federal legislation is reflected in all safety training and identified conflicts are eliminated. The Board also noted that the PPR are not listed or referenced in the EHS Manuals.

Additionally, Westcoast has not fulfilled its legal requirements set out in Section 50 of the PPR, which requires that “A company shall prepare and keep current a report setting out the number of employees necessary to operate its processing plant safely and the competencies required for each position.” Based on documents reviewed and interviews with operation staff, Westcoast was not able to demonstrate it was in compliance with the requirements of Audit sub-element 2.2 Legal Requirements.

Compliance Status: Non-Compliant

2.3 Goals, Objectives and Targets

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

References:

PPR SOR/2003
Section 10

COHSR 19.1(1)

Assessment:

Goals are tangible objectives for meeting Westcoast EHS Policy and principles. The goals represent a shift from identifying EHS hazards to improving overall EHS performance by continually setting and reaching targets. Each member of Westcoast’s Leadership at a level of Director or above develops and implements an annual personal Safety Action Plan. Formal staff goals for Active EHS Leadership (Leadership Safety Action Plans), which include: People Oriented Culture (Employee Recordable Injury Frequency, Employee Vehicle Incident Reporting and Contractor Recordable Injury Frequency); Physical Environment (Non-Recordable Incident Reporting and Recordable Incident Corrective Actions); and Environmental Impacts (Reportable Spills), are set to a yearly and a multi-

year plan within the Spectra Energy (Westcoast) EHS Blended Scorecard, an internal document used to determine individual goals and targets. Westcoast's 'Zero Incident Culture' assigns incident reporting responsibility to all Westcoast employees and contractors.

Employees discuss objectives with their supervisor at the beginning of the year, at least once during the year and again at the end of the year when the past year's performance is evaluated and objectives are established for the next year. Safety goals, targets and objectives have been identified for all staff and are included in individual job descriptions. Safety performance is included in the overall employee objectives and employees are provided recognition in meeting EHS performance objectives through a program known as the Short Term Incentive Pay (STIP). The Accountability Management System and Performance Management goals and objectives are reviewed three times per year. STIP is linked to recorded injuries, vehicle incidents, contractor recordable incidents and environmental spills (considered a failure of process safety). Senior Management may not be eligible for Long Term Incentive Pay if targets are not met.

The Operation Management System (OMS) includes: accountability programs, capital programs, compliance support programs, incident management programs, measurement programs, pipeline integrity programs, strategic approach, training programs and work management programs. The OMS is not applied to all of Westcoast's systems and is not linked to its Management of Change (MOC) process. It was also noted that, at the time of the audit, the Scorecards were not used to record voluntary regulatory instruments (Assurances of Voluntary Compliance or AVCs). The Board notes that AVCs are its primary compliance assurance tool and represent an identification of non-compliance and an associated compliance undertaking by companies. During the audit, Westcoast was advised that its internal reporting and management processes were deficient and should be updated to reflect that AVCs are non-compliances and should be managed as such. In its comments with respect to the Draft Audit Report, Westcoast provided documentation and records indicating that it had changed its practices to reflect the Board's identified issues. The Board has removed its recommendation with respect to AVCs and notes its future audit follow-up activities will include reviews of the continued management of AVCs.

With respect to the OMS system the Board notes that, with modifications, it could be appropriate for meeting the Board's management requirements and recommends that it be applied to all of the safety-related systems.

Compliance Status: Compliant with Recommendation

3.0 IMPLEMENTATION

3.1 Organizational Structure, Roles and Responsibilities

Expectations: The company shall have an organizational structure that allows its management and protection programs to effectively

function. The company should have clear roles and responsibilities, which may include responsibilities for the development, implementation and management of the management and protection programs.

References:

PPR SOR/2003 Sections 27, 28, 32, 50 and 54	CLC Part II 125(1), 125.1, 126, 134.1, 135(1), 136, 137
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Assessment:

The Westcoast, Roles and Responsibilities Performance Standard 1.2 establishes the expectations for demonstrating management's commitment and support to ensure the effective implementation of the EHS MS and improvement of EHS performance. Formal documentation for EHS roles, responsibilities and accountabilities for management, departments, employees and contractors includes: programs and procedures; job position descriptions; organization charts; roles; responsibilities; and authority matrices. Westcoast was not able to demonstrate compliance with respect to Organizational Structure. Under the NEB PPR, companies are required to "prepare and keep current a report setting out the number of employees necessary to operate its processing plant safely and the competencies required for each position." Westcoast's management was unable to demonstrate that this report had been generated at any time since the promulgation of the PPR in 2003. Senior staff interviewed were unaware of this safety requirement.

Compliance Status: Non-Compliant

3.2 Management of Change (MOC)

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

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

References:		
PPR SOR/2003 Section 10	CLC Part II 125(1) (z.05)-(z.06)	COHSR 19.5(4), 19.6(2)
Assessment:		
<p>The Board verified that a MOC procedure is in place which outlines the process of identifying, assessing and implementing procedural changes once they have been approved by the accountable individual (EHS MS Management of Change Performance Standard 2.7). There is also a collaborative process to review all Standard Operating Procedures against all regulatory requirements and best practices for all of Westcoast. EHS is leading the process with the support of Senior Management and Regional subject matter experts.</p> <p>Westcoast demonstrated that it has a formal process and dedicated staff for managing changes to its assets. However, Westcoast's MOC process, as demonstrated, is not considered compliant as it applies only to physical (asset) changes and not to changes required in practices or procedures that could result from:</p> <ul style="list-style-type: none"> • changes to legal requirements; • the identification of new hazards; or • results of monitoring, inspections or investigations. <p>Further, Westcoast's MOC process only manages changes on a reactive basis (i.e., changes once the need has been identified). The Board expectation is that company MOC processes be proactive and formally linked to processes for the identification of changes that could affect the management and protection programs (e.g., Integrity Management, Safety, Environmental Protection, Emergency Management Programs, etc.).</p> <p>The Board was unable to verify that a fully-implemented MOC program was in place to identify, document and analyze changes that could affect the EHS MS, including introduction of new risks, hazards or legal requirements.</p>		
Compliance Status: Non-Compliant		
3.3 Training, Competence and Evaluation		

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

References:

PPR SOR/2003 Sections 12, 15(2), 26, 33, 44(1), 45, 50, 52, 53 and 54	CLC Part II 124, 125(1)(q), 125(1)(s), 125(1)(z), 125(1)(z.01), 125(1)(z.03)	COHSR 10.14, 11.5(2), 11.11, 12.10(1.1)(a)(ii), 12.10(1.2), 12.15, 13.11, 14.23, 17.6(1), 20.10, 19.1(1), 19.2(2), 19.6
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Assessment:

Westcoast's Performance Standard establishes the minimum expectations to ensure that:

- appropriate training is identified for all employees;
- employees are properly trained in, and understand, applicable EHS compliance standards, regulations, company policies and procedures, and best management practices; and
- employees perform their tasks, duties and responsibilities in a manner that protects the health and safety of Westcoast employees, contractors, and the community.

Westcoast's Training Program Charter provides guidance and support to meet regulatory and business training expectations. Training provides employees with the knowledge and skills to perform their role. Employee competency assessment in the application of skills is the responsibility of the employee's leader or manager. The Accountability Management and Performance Management assessments determine employee competency and identify future training initiatives.

The 2011 scheduled Computer Based Training System initiatives include: Pigging Ergonomic Video; Safety; Leadership Training Determination Tool; OHSE Committee Member Training Determination Tool, SLAM – Personal Hazard Assessment; Industrial Field Ergonomics; Working At Heights; Supervisor Safety Leadership; Hand Safety; Incident Investigations; and Hazard Awareness.

Employee training records are stored in the LMS which generates monthly status reports for all leaders and groups, and annually assesses and communicates the status of the training programs and manuals. Employees are provided with any updates should additional training requirements be identified or should existing curriculums be changed. Westcoast also supports its safety personnel to further their education and training to acquire and maintain Safety Professional Designations.

Although Westcoast's Training Program met the requirements of this sub-element, the Board identified in sub-element 2.2 (Legal Requirements) of this appendix that a review of Westcoast's safety training is required to ensure federal legislation is reflected in the training and that identified conflicts are eliminated.

As this Non-Compliance is already addressed in sub-element 2.2, the Board finds Westcoast's Training Program to be Compliant with the recommendation that it update the program to address the Non-Compliance identified in sub-element 2.2.

Compliance Status: Compliant with Recommendation

3.4 Communication

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

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

References:

PPR SOR/2003 Sections
15, 26, 27, 29(4), 30, 31,
33(b), 35(b)(c), 36, 37,
38, 39(a)(c)(d)(e), 42, 43,
45, 46, 47, 48 and 49

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

Assessment:

Westcoast was able to demonstrate that it employs many methods for communicating safety requirements with its internal and external stakeholders. Communication of safety information is done through safety stand down meetings; quarterly employee meetings and safety updates; daily tailgate meetings; daily and weekly safety reports; Health and Safety Newsletters; monthly safety and communication meetings; monthly reports to the EHS Corporate Group; contract management activities, pre-job meetings, its intranet sites; etc. However, Board auditors were unable to verify that the Westcoast Internal and External Communication Performance Standard 6.0 (September 2006) is fully implemented and cross referenced to the OMS system to communicate all required safety information to the appropriate levels. For example, the audit identified that there is inconsistency in closeout reporting (e.g., ILP Report Card open incidents are: 42 incidents occurred, 35 open – no closures to incidents).

The Board was unable to verify that Westcoast meets all of the requirements of this sub-element and therefore is found to be Non-Compliant with respect to Communication.

Compliance Status: Non-Compliant

3.5 Documentation and Document Control

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

References:

PPR SOR/2003 Sections
9(2), 13, 27, 29, 30, 31,
42, 43, 46, 47, 49 and 50

CLC Part II 125(1)
(z.03)-(z.06), 125(1)
(z.09), 125.1(d)-(e),
125.1(f), 135.1(9)

COHSR 1.5, 2.23, 4.6,
5.17, 5.18, 8.12, 8.14(4)-
(7), 8.15, 10.3

Assessment:

Westcoast's EHS Standard Development Committee reviews the following to develop or revise an EHS standard: EHS practices and procedures currently available within Westcoast; legislation applicable to Westcoast; CSA or other applicable industry standards; Spectra Energy or Spectra Energy Transmission Policies; and industry best practices. Legal and Human Resources may be consulted as necessary during the development or revision of an EHS standard.

EHS Safety Specialists communicate draft standards to the OHSE Workplace Committees for review and comment in a timely manner. The EHS Standard Development Committee reviews all comments, updates the standards if necessary and provides feedback to individuals or committees who provided the input. The EHS Standard Development Committee develops an Implementation Impact Assessment for each proposed standard. Revised (updated) standards are sent to the EHS Director with comments from OHSE Workplace Committees and Implementation Impact Assessment for review, comment, and communication to the Operations Management Team (OMT) and OHSE Oversight Committee. Standards are endorsed by the OMT before review by the OHSE Oversight Committee. The OMT endorses new EHS Standards before they are approved by the EHS Director for implementation.

Proposed changes to EHS Standards are reviewed by the OHSE Oversight Committee to determine if consultation is required. The EHS Department has the authority to make minor administrative changes to Westcoast Standards and then communicate these changes via the Source.

Westcoast's EHS Manuals do not reference PPR requirements. Also, the Board noted a number of performance standards and procedures that are either in draft status or out-of-date. For example, the Board requires that the Westcoast Construction On-site Manual be the same as the Westcoast Construction Manual that is filed with the Board. The Board requires a review of all safety standards and procedures to ensure they are current and reflect revision dates and the PPR. Therefore the Board finds Westcoast to be Non-Compliant with respect to this sub-element.

Compliance Status: Non-Compliant

3.6 Operational Control-Normal Operations

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

References:

PPR SOR/2003 Sections
10, 12, 13, 16, 18, 19, 27,
28, 29, 30, 31, 34, 35,
42(a)(b)(c) and 50

CLC Part II 125(1),
125.1

COHSR 19.1(1)

Assessment:

The EHS MS contains procedures for identified work tasks typically encountered by Westcoast personnel. The procedures reference and acknowledge compliance with applicable legislation and with industry associations.

Frontline supervisors review safe work permit practices with employees at operational and safety meetings. Westcoast hazard assessment training for employees includes hazards and risks associated with tasks that are outlined in safe work permits.

As discussed previously in sub-element 2.1 of this appendix, it was confirmed that critical task lists, risk assessment and job hazard analyses that have been completed include various mitigating measures that form the basis of the EHS MS procedures and which would ensure operational control is maintained. Therefore, the Board finds Westcoast to be Compliant with this sub-element.

Compliance Status: Compliant

3.7 Operational Control-Upset or Abnormal Operating Conditions

Expectations: The company shall establish and maintain plans and procedures to identify the potential for upset or abnormal operating conditions, accidental releases, incidents and emergency situations. The company shall also define proposed responses to these events

and prevent and mitigate the likely consequence and/or impacts of these events. The procedures must be periodically tested and reviewed and revised where appropriate (example, after emergency events).

References:

PPR SOR/2003 Sections
13, 15(1)(d), 17, 18, 20,
21, 22, 23, 24, 25, 28,
35(a), 42, 44 2(d), 47 and
48

CLC Part II 125(1)(o)

COHSR 17.4, 17.5,
19.1(1)

Assessment:

The Board verified that Westcoast has developed and implemented an emergency preparedness and response plan. Interviews and document review verified that personnel safety issues such as the emergency evacuation and muster locations are discussed during orientations and fire evacuation procedures are posted. Emergency evacuation drills and mock exercises are held on a regular basis. Safety issues are standard items and are incorporated into the review and learn discussion for continual improvement purposes. Therefore the Board finds Westcoast to be Compliant with this sub-element.

Compliance Status: Compliant

4.0 CHECKING AND CORRECTIVE ACTION

4.1 Inspection, Measurement and Monitoring

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

of its surveillance and monitoring programs.

References:

PPR SOR/2003 Sections
10, 12, 13, 29(5), 40(a),
51, 52 and 53

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

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

Assessment:

Westcoast holds various meetings and completes reports which monitor and document the EHS MS safety component, including: daily and monthly progress reports; daily and weekly safety inspection reports; daily tool box meetings; weekly all staff meetings; weekly fire drills; weekly behaviour-based inspections; incident reporting; incident investigation when required; and completion of Incident Without Loss (IWOL) documentation which is tracked through Westcoast's Environment Performance and Safety System (EPASS).

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

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

The Accountability Management and Performance Management assessments determine employee competency and identify future training initiatives.

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

Therefore the Board finds Westcoast to be Compliant with this sub-element.

Compliance Status: Compliant

4.2 Corrective and Preventive Actions

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

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

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

References:

PPR SOR/2003 Sections
13, 47 and 52

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

COHSR 2.27, 7.3, 10.4,
10.5, 15.4, 19.1(1)

Assessment:

Westcoast's Regulatory Incident Reporting Guidelines for On-Call Supervisors is approved and communicated to control teams and on-call incident supervisors. The purpose of the guidelines is to assist Westcoast's On-Call Supervisors and On-Call Incident

Supervisors in the external reporting of “regulatory reportable” incidents that occur in both its federally and provincially regulated facilities. This regulatory reporting practice was put in place to ensure timely notification of reportable occurrences to the appropriate regulatory agency regardless of where the incident occurs across the facilities. The Regulatory Incident Reporting Guidelines For On-Call Supervisors is controlled by the incident management program and is reviewed on an annual basis by all stakeholders to ensure it is current. The One-Window Reporting Procedures, embedded in the EHS Checklist, are reviewed on initial hiring and annually thereafter. Evidence of the checklist review was found in LMS.

As identified in sub-element 2.3 Goals, Target and Objectives, above, it was identified that Westcoast’s management Scorecards were not being used to record and manage non-compliances (AVCs) but as part of its commentary on the Draft Audit Report, Westcoast submitted information indicating it had modified its processes to achieve compliance. The Board has therefore removed its finding with respect to this issue and will monitor the revised activities for continued application.

Also, as noted elsewhere in this audit report, it was identified that there is inconsistency in close-out reporting (e.g., ILP Report Card open incidents are: 42 incidents occurred, 35 open – no closures to incidents). Management of incident resolution to close-out is an important aspect of management of corrective and preventive processes. As a result the Board finds Westcoast to be non-compliant with this sub-element.

Compliance Status: Non-Compliant

4.3 Records Management

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

References:

OF-Surv-OpAud-W102-2010-2011 01
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PPR SOR/2003 Sections
9(2), 28(3), 39(b), 40(b)
and 55

CLC Part II 125(1)(g),

COHSR 1.5, 2.23, 2.24,
2.27(7), 4.6 5.17, 5.18,
6.10(7), 7.3(6),
8.18(3)1), 10.6, 10.15,
10.19(4), 11.12, 12.14,
14.23(4), 15.11, 16.13(2),
17.4(4), 17.8(2), 17.9(2),
17.10(2), 18.39, 18.40,
18.41, 18.42, 19.6(5),
19.8(2)

Assessment:

The Board confirmed through documentation and record review that Westcoast has implemented a record retention process which includes appropriate types of records to be retained, retention and disposition timeframes and disposal methods. Copies of all records requested were made readily available.

Westcoast has several repositories for safety-related information. It maintains safety data using the EPASS. The IWOL system is used for tracking incidents with no time loss. Hard copies of these records are maintained in the regional offices. The Westcoast Document Management and Retention Standard are posted on the EHS site of the Source. A posting communication was sent to all employees from Spectra Energy Records Management.

Based on documents reviewed and interviews conducted it was determined that Westcoast has an adequate records management strategy in place and is therefore found to be Compliant with this sub-element.

Compliance Status: Compliant

4.4 Internal Audit

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

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

References:

PPR SOR/2003 Sections
52, 53 and 54

COHSR 19.7(1)(2)

Assessment:

The operation of Westcoast's processing plants is subject to periodic audit by Spectra Energy Corporation's internal audit services and EHS audit groups.

Westcoast's audit team in Calgary conducts audits on capital expansion projects, while safety audits are conducted by its Manager, EHS Audits, based out of Houston, Texas. The audit cycle is determined by a comprehensive risk assessment. Local subject matter experts are contracted to ensure appropriate legislation is included in the protocol for the facilities being audited.

Review of the processes associated with Westcoast's internal audit programs indicated that the risk assessment methodologies and annual audit plans for both groups are corporately reviewed and approved by senior management. The audit identified that performance based audits are being performed and that TeamMate™, audit management software, is used to ensure action items are closed-out. TeamCentral™, an audit management database, is used for tracking audit projects, issues and recommendations.

It was verified through interviews and document review that Westcoast has an internal audit program to assess its EHS MS against its regulatory requirements. However, the Board notes that the absence of an effective process to identify and integrate all of the legal operational safety requirements could lead to incomplete EHS audit protocols and inaccurate internal audit findings. The audits conducted are performance audits, not compliance or technical audits.

Section 52 of the PPR states that a company shall conduct audits and inspections on a regular basis to ensure its processing plant is designed, constructed, operated or abandoned in compliance with these regulations.

Based on documents reviewed and interviews with operations staff, Westcoast was not able to demonstrate that it was in compliance

with the requirements of this sub-element.

Compliance Status: Non-Compliant

5.0 MANAGEMENT REVIEW

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

References:

PPR SOR/2003 Sections 13, 30,
35(a), and 50.

COHSR 11.2(4),
12.10(1.2), 19.6(3),
19.7(1)-(2)

Assessment:

Westcoast's EHS MS Performance Standard 9.4, Management System Review establishes minimum expectations for conducting a Management System Review with senior management to determine whether changes to the EHS Policy, EHS goals and targets or other elements of the EHS MS are necessary to ensure effectiveness of the EHS MS based on EHS audit results, EHS performance, changing business needs and/or stakeholder inputs. The Management System Review is conducted at least annually, preferably in the third quarter.

Management System Reviews may be conducted more frequently when:

- important new EHS regulatory or EHS issues arise;
- significant hazards/risks are identified; or
- previous audits/assessments have identified on-going deficiencies in the EHS MS.

Section 50 of the PPR requires that a company shall prepare and keep current a report setting out the number of employees necessary to operate its processing plant safely and the competencies required for each position to ensure resources are identified and supported.

Although the Board was able to verify that there is a level of oversight provided, given the absence of rigor in the reporting and tracking of non-compliances, as well as the deficient audit process described in sub-element 4.4 of this appendix, the Board has determined that the level of management oversight does not meet its expectations.

A detailed management review would be required to complete the PPR Section 50 report. Therefore, Westcoast was found to be Non-Compliant with this sub-element.

Compliance Status: Non-Compliant

APPENDIX III
WESTCOAST ENERGY INC., CARRYING ON BUSINESS AS SPECTRA ENERGY TRANSMISSION (WESTCOAST)
ENVIRONMENTAL PROTECTION PROGRAM AUDIT EVALUATION TABLE

<p>1.0 POLICY AND COMMITMENT</p> <p>1.1 Policy and Commitment Statements</p> <p>Expectations: The company shall have a policy approved and endorsed by senior management (the Policy). It should include goals and objectives and commit to improving the performance of the company.</p>
<p>References:⁵</p> <p>PPR-2003 sections 4, 5, 10 and 14</p>
<p>Assessment:</p> <p>The Board auditors were able to view an adequate and up-to-date corporate Environment, Health and Safety (EHS) policy that meets the Board's expectations. The Policy statement and accompanying documentation outline Westcoast's management principles and clear program objectives. The Environmental Protection Program (EPP) is guided by these documents.</p>
<p>Compliance Status: Compliant</p>

⁵ Each "Reference" in this table contains specific examples of the "legal requirements" applicable to each element but are not necessarily a complete list of all applicable legal requirements.

2.0 PLANNING

2.1 Hazards Identification, Risk Assessment and Control⁶

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

References:

PPR-2003 sections 4, 5, 10 and 14

Assessment:

Upon review of Westcoast's EPP documents and records, and interviews with staff, Westcoast was not able to demonstrate that it had met the Board's requirements with respect to this sub-element.

Westcoast was able to demonstrate that it had identified some of its environmental hazards and aspects; however, it would appear that the items identified and managed formally were, for the most part, limited to the requirements stated in its provincial operating permits. During interviews with staff, the company identified that many of the environmental hazards and aspects were integrated and addressed within the various standard operating procedures (SOPs) used by its staff during routine operation of the facility. Review of a sample of the documents provided, however, indicated very few, if any, of the potential environmental aspects were formally identified in the SOPs (see also sub-element 3.6 Operational Control-Normal Operations).

Similarly, company staff interviewed indicated that environmental hazards and aspects would, or could, be identified during the regularly-conducted "Audit Inspections" of the facility. A review of the records of the activities however, indicated that the process implemented does not include standardized environmental hazards and aspects nor are there requirements for routine attendance by environmental staff during the Audit Inspections. See also sub-element 4.1 Inspection, Measurement and Monitoring, below.

⁶ Hazard: Source or situation with a potential for harm in terms of injury or 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

Compliance Status: Non-Compliant**2.2 Legal Requirements**

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

References:

PPR-2003 sections 4, 5, 10, 14 and 52

Assessment:

Review of Westcoast's process for the identification and integration of its legal requirements indicated that the company's processes did not meet the Board's expectations.

Westcoast staff provided records outlining its legal requirements at various levels of detail. For example, provincial permit environmental requirements were outlined and monitored in detail, whereas other legislative requirements were noted at a very high level. Westcoast staff demonstrated that its provincial permit requirements were integrated within SOPs for various processes while some legislative requirements were not included in appropriate detail so as to provide assurance of compliance.

Interviews with staff with environmental or facility management responsibilities at various levels within the organization indicated an inconsistent awareness of lists or records of environmental legal requirements or formalized procedures for their development, maintenance, and integration.

Of particular note to the Board was the lack of a description of the NEB PPR EPP requirements and expectations that could be used in the development and evaluation of Westcoast's SOPs and audit, inspection and investigation processes.

As the Board's regulations are process and outcome focused, a clear interpretation and description of the requirements in relation to Westcoast's facilities and associated activities is required to ensure compliance.

Compliance Status: Non-Compliant

2.3 Goals, Objectives and Targets

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

References:

PPR-2003 section 10 and 14

Assessment:

Westcoast was able to demonstrate compliance with this element through documentation and records provided to the Board's auditors.

Company staff provided records indicating that, on an annual basis, senior management sets corporate goals, objectives and targets for the company that are applied and measured at each facility or management unit on an on-going basis. The results are collected, measured and monitored by senior management of Westcoast and on an overall corporate basis as well.

Westcoast staff indicated that senior management has identified five program areas for measurement and improvement. These areas appear to relate back to the corporate Policy and purpose statements. This includes environmental performance. Senior management indicated that they have set what they would consider to be aggressive goals for improvement in these areas.

At the facility level, environmental staff indicated that the measures include non-compliance with provincial permits, spills and releases, and public complaints.

Compliance Status: Compliant

3.0 IMPLEMENTATION

3.1 Organizational Structure, Roles and Responsibilities

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

References:

PPR-2003 section 4, 5, 10 and 14

Assessment:

Through interviews as well as document and record review, Westcoast was able to demonstrate that all staff with environmental responsibilities have clear role and responsibility statements applicable to their positions within the environmental or organizational structure.

The company, however, was not able to demonstrate that it had an organizational structure that would allow its EPP to effectively function. Board inspections conducted prior to both the audit and interviews, as well as records and documents reviewed during the audit, indicate that some of the findings and non-compliances noted in this appendix could relate to having too few frontline environmental staff to plan and conduct routine environmental activities. For example, qualified environmental staff are not routinely involved in conducting, or training staff to conduct, facility inspections. Also, some of the other regulated facilities within the area of responsibility of the local environmental specialist have not been inspected on an appropriate or regular basis. Interviews with various staff members indicated that this was related to having too large of an area of responsibility for the environmental staff. Further, Board inspections conducted in conjunction with this audit identified environmental issues that could be considered routine and understood industry-wide but had remained unmitigated for a long time. An example of this is the Assurance of Voluntary Compliance received from the company with respect to chemical/drum storage on-site. The Board inspector noted, among other things, that the structure used for chemical storage did not meet regulatory requirements in that it did not protect the barrels from the elements, nor did it have secondary containment to collect any liquids spilled or lost as a result of container failure. The structure had been used for many years and the company had not identified it as a non-compliance regardless of how many times the area was routinely inspected. Interviews with various staff indicated that the facility inspections do not routinely include the environmental staff because of workload issues nor are the staff available to train the facility inspectors. Many of the issues identified in the Board's inspections are similar to this issue in

that they would be considered routine or standard practice issues, had been on-going for some time and should have been identified by an adequate inspection program. In addition to the above, staff interviews with respect to training indicated that the high workload had prevented environmental training from occurring for some staff.

Compliance Status: Non-Compliant

3.2 Management of Change (MOC)

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

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

References:

PPR-2003 sections 4 and 10

Westcoast demonstrated that it has a formal process and dedicated staff for managing changes to its assets. However, Westcoast's MOC process, as demonstrated, is not considered compliant as it applies only to physical (asset) changes and not to changes required in practices or procedures that could result from:

- changes to legal requirements;
- changes to industry standards or practices;
- the identification of new hazards; or
- results of monitoring, inspections or investigations.

Further, Westcoast's MOC process only manages changes on a reactive basis (i.e., changes once the need has been identified). The Board expectation is that company MOC processes be proactive and include requirements for the identification of changes that could affect the management and protection programs (e.g., Integrity Management, Safety, Environmental Protection, Emergency Management Programs, etc.).

Compliance Status: Non-Compliant

3.3 Training, Competence and Evaluation

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

References:

PPR-2003 sections 4, 5, 10, 12, 14, 33, 38, 44, 45 and 54

Assessment:

Although Westcoast was able to demonstrate that it invested a significant amount of resources in developing and implementing a formal training process, the company was not able to demonstrate full compliance with the Board's training and competency requirements.

Through documentation and record review, and during interviews with staff, the company demonstrated that it has dedicated training staff who have developed a formalized training process within its Operations Management System. The process involves formal identification, assignment and monitoring of training requirements. The training program involves competency-based training and evaluation, where applicable. These formal processes and practices were appropriate in managing a training program to meet the Board's requirements.

Where the company was not able to demonstrate compliance was with respect to environmental content, contractor competency evaluation and the identification and inclusion of content for maintenance of environmental training for the company's environmental professionals.

During interviews throughout the organization, company staff identified that facility operations staff received training in regard to environmental aspects and controls as part of their on-boarding (new staff orientation) process and, with respect to environmental controls associated with facility operations, integrated into the SOPs and the training for each SOP. Further, during interviews,

company environmental and supervisory staff indicated that staff involved in the routine Audit Inspections receive training for identifying environmental issues by shadowing the incumbent inspectors who use standardized practices. The Board auditors were however, unable to find clear evidence of the inclusion of environmental considerations during the review of example SOPs and inspection records provided by the company. Therefore, the implementation of training could not be verified. The results of the lack of environmental training of Audit Inspection staff is also linked to the finding of sub-element 3.1 Organizational Structure, Roles and Responsibilities.

With respect to the assurance of contractor competence, company staff indicated that Westcoast has master service agreements with three companies to undertake work on its behalf. Staff indicated that the competency of the contractor staff is being managed and assured by a third party service provider, ISNETWORLD on its behalf. As part of the audit, Westcoast staff arranged for a presentation and interview with ISNETWORLD staff to review its role and activities. The interview indicated that ISNETWORLD primarily manages safety histories, insurance and workman's compensation issues of contractors. While it indicated that it reviews and manages competency of contractors in other countries for its clients, it does not do so in Canada because of a lack of demand by Canadian companies. Westcoast was therefore unable to demonstrate the assurance of the competency of its contractors.

Additionally, companies should also demonstrate that they have practices to ensure that their professional staff remain current and competent in their areas of expertise. During the audit, Westcoast was unable to demonstrate that it has a program that reviews and ensures the competency of its professional staff on an on-going basis. As an example, the area environmental specialist was unable to provide evidence of a structured or up-to-date professional training and competency assurance plan.

The last reported professional training for the individual was five to six years prior to the audit field activities.

Compliance Status: Non-Compliant

3.4 Communication

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

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

References:

PPR-2003 sections 4, 5, 10, 14, 15, 26, 30, 33, 36, 37, 38, 39, 42, 46, 47, 48, 49, 18, 28, 29 and 48

Assessment:

Through document and record review, as well as interviews with its staff, Westcoast was able to demonstrate compliance with this sub-element.

The company was able to demonstrate that it employs many methods for communicating its environmental program with its internal and external stakeholders. Staff are provided information regarding environmental, emergency management and HSE in general during induction activities and throughout an employee’s tenure.

Environmental staff were also able to demonstrate appropriate, on-going communication practices, procedures and activities between Westcoast and its external stakeholders. The stakeholders involved included corporate and private individuals surrounding the facilities and the various municipalities and provincial and federal environmental agencies with regulatory authorities.

Compliance Status: Compliant

3.5 Documentation and Document Control

Expectations: The company should have documentation to describe the elements of its management and protection programs- where

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

References:

PPR-2003 sections 4, 5, 10 and 30

Assessment:

Through document and record review and interviews with its staff, Westcoast was able to demonstrate compliance with this sub-element with respect to environmental protection.

Westcoast demonstrated that it has a formalized process for the development, revision and management of EHS documentation. Documents are communicated appropriately and the Operations Management Team and an OHSE Oversight Committee provide on-going oversight of each process and document.

Review of the documentation and associated records indicated that Spectra has been implementing its documented management procedures on an on-going basis.

Compliance Status: Compliant

3.6 Operational Control-Normal Operations

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

References:

PPR-2003 sections 5 and 13

Assessment:

During the audit, the company was not able to demonstrate full compliance with this sub-element.

Review of the company's implemented controls indicated that it has developed a significant amount of proceduralized controls for items contained in its provincial permits. Review of these procedures and accompanying records indicated that they were appropriate and that they were being implemented as designed.

However, as noted in sub-element 2.1 Hazards Identification, Risk Assessment and Control, and elsewhere, the company has significantly limited its formal environmental hazard identification and accompanying controls to its provincial permit requirements. Although this does address the majority of the significant issues, it does not assure adequate control of all of the hazards, aspects and legal requirements needing to be addressed.

Compliance Status: Non-Compliant**3.7 Operational Control-Upset or Abnormal Operating Conditions**

Expectations: The company shall establish and maintain plans and procedures to identify the potential for upset or abnormal operating conditions, accidental releases, incidents and emergency situations. The company shall also define proposed responses to these events and prevent and mitigate the likely consequence and/or impacts of these events. The procedures must be periodically tested and reviewed and revised where appropriate (for example, after emergency events).

References:

PPR-2003 sections 5 and 13

Assessment:

Review of Westcoast's documents and records, and interviews with staff indicated that, regardless of the finding of non-compliance with sub-element 3.6 (Operational Control – Normal Operations) above, it was able to demonstrate that it has appropriate controls to minimize, respond to or mitigate the environmental effects associated with upset or abnormal operating conditions of its operating processes. The formal procedures, including emergency management, which have been developed included all of the hazards which should be addressed. Westcoast was able to demonstrate that its staff were being trained and were implementing the procedures and practices as described in the documents. Further, it was noted that environmentally related process procedures included practices to be implemented if abnormal or upset conditions were detected or were occurring.

Compliance Status: Compliant**4.0 CHECKING AND CORRECTIVE ACTION****4.1 Inspection, Measurement and Monitoring**

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

References:

PPR-2003 sections 4, 5, 10, 14, 33, 40, 41, 52, 53 and 55

Assessment:

Westcoast was not able to demonstrate compliance with the Board's expectations.

During the audit company staff indicated that there are a number of different ways that Westcoast inspects and monitors its processing plant facilities and processes. These include process tests and monitoring, set process building inspections, and general facility Audit

Inspections.

Document and record review, as well as interviews with staff indicated that Westcoast had developed and implemented appropriate monitoring and inspection practices and procedures for ensuring that its plant processes are meeting all of its environmental conditions as imposed by provincial regulation or permits. Further, many of the specific processing plant facilities have standardized inspection processes that ensure the safe operation of each area.

In addition to the above-noted specific provincially regulated process inspections and monitoring, Westcoast indicated that its staff conduct scheduled general “Audit Inspections” of its facilities. These Audit Inspections were reported to address “general” environmental requirements as well as safety, security and other facility issues at the processing plant. However, as noted elsewhere in this appendix, interviews with staff, and document review confirmed that the company has not developed or implemented an appropriate process for conducting the environmental portion of these inspections. The audit identified that environmental staff are not routinely involved in the inspection of the facilities nor do they routinely participate in the training of staff whose role it is to complete them. Further, record reviews indicated that there are no standardized inspection documents or environmental checklists used by the Audit Inspection staff. This has resulted in several non-compliances being noted by the Board in its Operations Inspections for which it received assurances of voluntary compliance.

Compliance Status: Non-Compliant

4.2 Corrective and Preventive Actions

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

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

The company should develop procedures to analyze incident data in order to identify deficiencies and opportunities for improvement in

its management and protection programs and procedures.
<p>References:</p> <p>PPR-2003 sections 4, 5, 10, 14, 16 – 25, 28 – 31 and 52 - 55</p>
<p>Assessment:</p> <p>Westcoast was able to demonstrate, through document and record review, that it has developed and implemented appropriate incident investigation processes. Westcoast was able to demonstrate that it has adequate processes in place to identify, develop and implement corrective and preventative actions that may be identified in its management or incident investigation processes.</p>
<p>Compliance Status: Compliant</p>
<p>4.3 Records Management</p> <p>Expectations: The company shall establish and implement procedures to ensure that the records supporting the management and protection programs are retained, accessible and maintained. The company shall, as a minimum, retain all records for the minimum lengths of time as required by the applicable legislation, regulation and standards incorporated by reference into the regulation.</p>
<p>References:</p> <p>PPR-2003 sections 4, 5, 10, 14 and 55</p>
<p>Assessment:</p> <p>Record and document review confirmed that the company had record retention processes in place which includes appropriate:</p> <ul style="list-style-type: none"> • types of records to be retained; • retention timeframes; and • disposal methods. <p>All records requested by the Board auditors were readily retrieved.</p>

<p>Compliance Status: Compliant</p>
<p>4.4 Internal Audit</p> <p>Expectations: The company shall develop and implement a documented process to undertake audits of its management and protection programs and procedures. The audit process should identify and manage the training and competency requirements for staff carrying out the audits. These audits shall be conducted on a regular basis.</p>
<p>References:</p> <p>PPR-2003 sections 4, 5, 10, 14 and 52- 55</p>
<p>Assessment:</p> <p>During the audit the company demonstrated that it has two processes for conducting audits of its facilities. These processes were implemented by staff from Calgary, Alberta or in its head office in Houston, Texas. The Board examined these processes, and management thereof, and has determined that they would meet the Board's requirements if applied appropriately to the EPP.</p> <p>During the audit, the company provided copies of internal audits conducted by its Houston based HSE auditing group. Review of the internal audit records indicated that an appropriate process had been developed for conducting the audit and managing the results through to implementation of the corrective action plans for noted deficiencies.</p> <p>The audit process did not, however, meet the requirements contained in the PPR. The PPR require that audits be undertaken to ensure compliance with relevant portions of the <i>National Energy Board Act</i>, the regulations, any certificate requirements and, on an annual basis, the competency of its employees at the plant. Review of the company protocols indicated that the audit did not meet these requirements. The audit protocols and results did not contain itemized lists of the regulatory or certificate requirements, nor did they contain appropriate audit definitions of the National Energy Board's outcome-based program requirements to evaluate against.</p>
<p>Compliance Status: Non-Compliant</p>
<p>5.0 MANAGEMENT REVIEW</p> <p>5.1 Management Review</p>

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

References:

PPR-2003 sections 4, 5, 14 and sections 50 through 54

Assessment:

Interviews and record reviews indicate that the EPP undergoes review by Westcoast's senior management on a regular basis structure starting at the plant manager through to the president of the company. Westcoast's senior management also holds meetings on a regular basis at different field locations to evaluate the operations of the various facilities.

While the Board acknowledges the amount of review of the EPP by Westcoast senior management, based on the non-compliances identified in sub-elements 3.1 and 4.4, the Board is not satisfied that management review has been undertaken with a view to ensuring the EPP's continuing suitability, adequacy and effectiveness. The Board views compliance and findings for these sub-elements to rest with senior management. The Board expects senior management to ensure and demonstrate that there are appropriate human resources to operate its processing plants. Further, the Board is of the view that senior management is responsible for compliance with its NEB PPR Part 7, Audits, Inspections and Record Retention requirements.

As well, the PPR clearly indicates that an annual audit of the competencies of operational and supervisory employees be undertaken as outlined in PPR section 54. The Board also views this as the responsibility of company senior management.

Compliance Status: Non-Compliant

**APPENDIX IV
WESTCOAST ENERGY INC., CARRYING ON BUSINESS AS SPECTRA ENERGY TRANSMISSION (WESTCOAST)
EMERGENCY MANAGEMENT PROGRAM AUDIT EVALUATION TABLE**

<p>1.0 POLICY AND COMMITMENT</p> <p>1.1 Policy and Commitment Statements</p> <p>Expectations: The company shall have a policy approved and endorsed by senior management (the Policy). It should include goals and objectives and commit to improving the performance of the company.</p>
<p>References:⁷</p> <p>PPR-2003 sections 4, 5, 10, 13 and 14</p>
<p>Assessment:</p> <p>The Board auditors were able to view an adequate and up-to-date corporate Environment, Health and Safety policy which meet the Board’s expectations. The Policy statement and accompanying documentation outline Westcoast’s management principles and clear program objectives. The Emergency Management Program (EMP) is guided by these documents. The review of Westcoast’s overarching Emergency Management (EM) Manual indicated that the company has developed EM-specific policy documents which build on the corporate policy documents.</p> <p>All staff interviewed were aware of the existence and content of the appropriate policy documents.</p>
<p>Compliance Status: Compliant</p>

⁷ Each “Reference” in this table contains specific examples of the “legal requirements” applicable to each element but are not necessarily a complete list of all applicable legal requirements.

2.0 PLANNING

2.1 Hazards Identification, Risk Assessment and Control⁸

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

References:

PPR-2003 sections 4, 5, 10, 13, 14, 18, 19, 22, 26, 27, 29 – 31, 33, 47 and 49

Assessment:

During review of Westcoast's EM manuals and interviews with staff, Westcoast was able to demonstrate that it had identified and risk-assessed the hazards associated with its McMahon Processing Plant facilities. Westcoast demonstrated that it had developed and implemented processes for the identification of its EM planning zones (EPZ) associated with the hazards posed by its plant and pipelines which feed in and out. Westcoast staff demonstrated that the hazard identification processes and EPZ were being utilized in the development of its other EM-related activities including its awareness, continuing education and liaison programs.

Compliance Status: Compliant

2.2 Legal Requirements

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

⁸ Hazard: Source or situation with a potential for harm in terms of injury of ill health, damage to property, damage to workplace environment, or a combination of these. Risk: Combination of the likelihood and consequence(s) of a specified hazardous event occurring

<p>References:</p> <p>PPR-2003 sections 4, 5, 9 - 11, 13 – 15, 27, 29, 31 and 52</p>
<p>Assessment:</p> <p>Through record and document review, Westcoast EM staff demonstrated that it has developed and implemented adequate processes and activities for the identification and integration of the legal requirements related to its EM obligations.</p> <p>Further, Westcoast staff demonstrated that the company is actively involved in the development and improvement of the various technical standards utilized by industry. This demonstrates Westcoast’s commitment to not only meeting its requirements but also attempting to improve safety.</p>
<p>Compliance Status: Compliant</p>
<p>2.3 Goals, Objectives and Targets</p> <p>Expectations: The company should have goals, objectives and quantifiable targets relevant to the risks and hazards associated with the company’s facilities and activities (i.e. construction, operations and maintenance). The objectives and targets should be measurable and consistent with the Policy and legal requirements and ideally include continual improvement and prevention initiatives, where appropriate.</p>
<p>References:</p> <p>PPR-2003 section 10 and 14</p>
<p>Assessment:</p> <p>Westcoast EM staff were able to demonstrate compliance with this sub-element through documentation and records provided to the Board’s auditors. Westcoast’s corporate emergency management manual contains clear objectives for the EM program. Westcoast sets annual targets related to its exercise program on an annual basis.</p> <p>As well, review of Westcoast’s EM exercise documentation and records indicates that specific objectives are set, measured and managed for each exercise conducted.</p>

Compliance Status: Compliant

3.0 IMPLEMENTATION

3.1 Organizational Structure, Roles and Responsibilities

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

References:

PPR-2003 section 10, 13, 14, 27, 28, 32, 50 and 54

Assessment:

Westcoast was not able to demonstrate compliance with respect to organizational structure. Under section 50 of the PPR, companies are required to “prepare and keep current a report setting out the number of employees necessary to operate its processing plant safely and the competencies required for each position.” In order to determine the number of staff and competencies required to operate the processing plant safely, a company would have to identify all processes, hazards and response scenarios in the event of an emergency situation, as well as the roles and responsibilities of each required position. Due to the important role that safety personnel would play in any emergency situation occurring at the processing plant, it is expected that roles and responsibilities with respect to emergency management be identified in this Section 50 report. Westcoast’s management was unable to demonstrate that this report had been generated at any time since the promulgation of the PPR in 2003. Senior staff interviewed were unaware of this safety requirement.

Through document and record review, as well as interviews with staff, Westcoast was able to demonstrate compliance with respect to the roles and responsibilities expectations.

The auditors were able to view roles and responsibility statements and documents for all staff involved in the management, development and implementation of the EMP. All company staff interviewed were able to clearly demonstrate knowledge of their involvement and expectations with the management of the program.

Companies must be able to proactively demonstrate that they have a clearly defined organizational structure including documented roles and responsibilities for all staff who could be involved in an emergency. Regardless of the non-compliance with PPR section 50, identified above, the Board’s audit activities indicated that Westcoast does meet the requirements with respect to having an appropriate

EM structure including appropriately defined roles and responsibilities for staff involved in a response. The auditors reviewed EM response organization charts, role and responsibility statements and job descriptions. Westcoast demonstrated that it trains its staff in the formal Incident Command System (ICS) at the BC Justice Institute. ICS is an internationally recognized organizational system for providing oversight and management of emergencies. Westcoast staff receives ICS 100 through 300 training dependant on expected roles.

Further, the auditors viewed formal documentation for the organization and use of mutual aid practices between the various companies located in the Taylor, BC, area. In these documents, the roles, responsibilities and expectations of the individuals and organizations were clearly defined. Westcoast's documentation also outlined its involvement with the Liquid Propane Gas Emergency Response Corporation (LPGERC). The LPGERC is a member-operated corporation for providing aid and response during a LPG emergency involving shippers.

Compliance Status: Non-Compliant

3.2 Management of Change

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

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

References:

PPR-2003 sections 4 and 10

Assessment:

Westcoast demonstrated that it has a formal process and dedicated staff for managing changes to its assets. However, Westcoast's MOC process, as demonstrated, is not considered compliant as it applies only to physical (asset) changes and not to changes required in practices or procedures that could result from:

- changes to legal requirements;

- changes to industry standards or practices;
- the identification of new hazards; or
- results of monitoring, inspections or investigations.

Further, Westcoast's MOC process only manages changes on a reactive basis (i.e., changes once the need has been identified). The Board expectation is that company MOC processes be proactive and formally linked to processes for the identification of changes that could affect the management and protection programs (e.g., Integrity Management, Safety, Environmental Protection, Emergency Management Programs, etc.).

With respect to EM program MOC, on a less formalized basis, the EM coordinator and staff do proactively identify and manage changes to the EM program and documentation in an adequate manner. However, as this practice is not fully proceduralized, and given the non-compliant finding associated with the formal company-wide process, this element is found to be non-compliant.

Compliance Status: Non-Compliant

3.3 Training, Competence and Evaluation

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

References:

PPR-2003 sections 4, 5, 10, 12 - 15, 26, 33, 37, 38, 44, 45, 50 and 52 – 54

Assessment:

Through document and record review, as well as interviews with staff, Westcoast was able to demonstrate compliance with this sub-element.

The Board's auditors were able to review documented EM training requirements that were appropriate for the facilities audited.

Record review indicated that the EM training program was being monitored on a regular basis by the EM coordinator, the McMahon Processing Plant manager, and other senior management. Staff receive EM information, guidance and training starting with the employee induction process and continues throughout their employment with Westcoast. As noted in sub-element 3.1, Organizational Structure, Roles and Responsibilities above, staff receive training in formal incident command practices and procedures which allows for an integrated response (with other first responders) utilizing a common, standardized structure. The Board's auditors were provided copies of Westcoast's EM training handbooks and knowledge checklists used by instructors to ensure consistent learning practices.

EM training and competency requirements include, in addition to knowledge-based training for company personnel, the need to demonstrate an ability to respond to the various emergencies that may occur at the facilities. As well, the company must demonstrate that it has developed a program of continuing education and awareness for other first responders who may attend or manage emergencies involving the regulated facilities. The auditors were able to view documents and records detailing robust and all-inclusive continuing education, awareness and exercise programs involving company staff, local (e.g., municipal, fire and police staff) regional (e.g., provincial environment and forest fire staff) responders, and mutual aid organizations and companies. The records indicated that the company was conducting well-attended, regular, planned exercises with clear program, learning and coordination objectives.

Additionally, review of records associated with the continuing education and awareness programs and the exercises included post-activity review and learn activities which resulted in improvements to company plans, processes and procedures, where required.

Compliance Status: Compliant

3.4 Communication

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

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

References:

PPR-2003 sections 4, 5, 10, 13 - 15, 18, 26 - 30, 33, 35 - 39, 42, 43 and 46 - 49

Assessment:

Through document and record review and interviews with its staff, Westcoast was able to demonstrate compliance with this element.

The company was able to demonstrate that it employs many methods for communicating its EMP with its internal and external stakeholders. Staff are provided information regarding EM and Health, Safety and Environment practices in general during induction activities and throughout an employee's tenure during employee competency training, safety meetings, EM exercises and drills, and routinely as part of the on-line information practices. Documents reviewed indicated that two-way communication of EM information was routinely being undertaken between and across all levels of the organization.

EM staff were also able to demonstrate appropriate, on-going communication practices, procedures and activities between Westcoast and its external stakeholders. The stakeholders involved included corporate and private individuals within the various planning zones, municipalities, responder agencies, provincial and federal organizations and mutual aid partners.

In reviewing the stakeholder communication practices the Board noted that the practices were documented and, where applicable, included checklists and guidance for staff to ensure that critical information was being provided.

Compliance Status: Compliant

3.5 Documentation and Document Control

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

References:

PPR-2003 sections 4, 5, 9, 10, 13, 27, 29 – 31, 42, 43, 46, 47, 49 and 50

Assessment:

Through document and record review and interviews with its staff, Westcoast was able to demonstrate compliance with this sub-element with respect to EM.

Westcoast provided copies of its EM manuals, plans and responder handbooks for review by the Board's auditors. With the exception of the site-specific response procedures for the McMahon Processing Plant as outlined in sub-element 3.7 Operational Control-Upset or Abnormal Operating Conditions and the non-compliant MOC practices outlined in sub-element 3.2, Westcoast had developed appropriate documentation for the communication, development, implementation and management of its EM program and for responding to and managing its potential emergencies.

Westcoast's EM staff demonstrated processes for ensuring that all critical EM documentation (EM plans, procedures, etc.) was being regularly and formally reviewed, and revised on an on-going basis. EM manuals and plans are kept in electronic format on Westcoast's internal intranet site and in paper format using controlled documentation practices.

Review of the documentation and associated records indicated that Westcoast has been implementing its document management procedures on an on-going basis.

Compliance Status: Compliant

3.6 Operational Control-Normal Operations

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

References:

N/A

Assessment:

By definition, EM controls are considered to be controls for managing and responding Upset or Abnormal Operating Procedures;

therefore, the audit results for the entire EM program, including proactive activities and documentation such as training, etc. will be documented in element Operational Control-Upset or Abnormal Operating Conditions, below.

Compliance Status: N/A

3.7 Operational Control-Upset or Abnormal Operating Conditions

Expectations: The company shall establish and maintain plans and procedures to identify the potential for upset or abnormal operating conditions, accidental releases, incidents and emergency situations. The company shall also define proposed responses to these events and prevent and mitigate the likely consequence and/or impacts of these events. The procedures must be periodically tested and reviewed and revised where appropriate (for example, after emergency events).

References:

PPR-2003 sections 13, 14, 29 - 31

Assessment:

Through documents, records and staff interviews, Westcoast demonstrated that it has a number of controls for addressing the hazards and risks associated with upset conditions. The primary controls used by Westcoast are the proactive development of its corporate Spectra Energy EM Manual and site specific Spectra Energy Field Emergency Response Plan - Taylor Complex. These documents contain descriptions of the potential incidents and hazards caused by emergencies across Spectra Energy's system and, in the case of the latter document, specifically at the McMahon Processing Plant facilities. These documents also include: descriptions of the hazardous products and associated emergency planning zones; immediate actions to be taken in the case of an incident; the various roles and responsibilities of staff and responders during an incident; reporting and communication requirements; and, other information related to the incidents. Westcoast also provided copies of its First Responder Handbook, which is a focused and condensed version of the EM manual for use by field staff as a resource document in the event of an incident.

Review of the EM manual and site specific plan indicated that they were well organized, up-to-date and contained all of the practices associated with each individual hazard. While these manuals are extensive, and describe initial actions to be taken in the event of an incident occurring, it was noted that the site specific plan for the facilities required the development of a more complete set of emergency scenarios and the individual procedure sets required to address the scenarios. The Taylor Complex is large and has many activities being undertaken at any given time. In the event of an incident related to loss of containment, there would have to be a specific set of pre-planned procedures in order to minimize the impact on employees or the public, or prevent further incidents

occurring in a “chain-reaction.” It is the Board’s view that, while the manual and site specific plan contain many of the procedures required to respond to an emergency incident, Westcoast’s site-specific emergency management plans for this, and all of its regulated facilities, need to include descriptions of and response plans related to potential emergency scenarios.

Compliance Status: Non-Compliant

4.0 CHECKING AND CORRECTIVE ACTION

4.1 Inspection, Measurement and Monitoring

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

References:

PPR-2003 sections 4, 5, 10, 12 - 14, 29, 33, 40, 41, 52, 53 and 55

Assessment:

Through document and record review and during interviews with staff, Westcoast demonstrated that the development and implementation of its EM program was being adequately monitored. Board auditors were shown records of review by program and senior managers with respect to the development of documents, training and competency, mutual aid agreements, exercises, awareness programs, etc. The Board auditors were shown procedures requiring, and records of, formal evaluations for training, exercises, investigations and responses. Westcoast also presented records indicating follow-through to close-out of issues requiring changes.

Compliance Status: Compliant

4.2 Corrective and Preventive Actions

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

- set criteria for non-compliance;
- identify the occurrence of any non-compliances;
- investigate the cause(s) of any non-compliances;
- develop corrective and/or preventative actions; and
- effectively implement the required corrective and/or preventative actions.
- The company should develop procedures to analyze incident data in order to identify deficiencies and opportunities for improvement in its management and protection programs and procedures.

References:

PPR-2003 sections 4, 5, 10, 13, 14, 16 – 25, 28 – 31, 47 and 52 – 55

Assessment:

Westcoast was able to demonstrate through document and record review that it has developed and implemented appropriate incident management and investigation processes. Westcoast was also able to demonstrate that it has adequate processes in place to identify, develop and implement corrective and preventative actions that arise from its management or incident investigation processes.

Compliance Status: Compliant

4.3 Records Management

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

protection programs are retained, accessible and maintained. The company shall, as a minimum, retain all records for the minimum lengths of time as required by the applicable legislation, regulation and standards incorporated by reference into the regulation.

References:

PPR-2003 sections 4, 5, 9, 10, 13, 14, 28, 39, 40 and 55

Assessment:

Records relating to the EMP were retained in the regional offices in Charlie Lake, BC. Document review confirmed that the company had record retention processes in place which include appropriate types of records to be retained, retention timeframes and disposal methods. All records requested were readily retrieved.

Compliance Status: Compliant

4.4 Internal Audit

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

References:

PPR-2003 sections 4, 5, 10, 13, 14 and 52-55

Assessment:

While the EM manager and other senior staff at Westcoast closely monitor the EM program, the company did not present information indicating that an adequate audit of the EMP either on a stand-alone basis, or in conjunction with either Safety and/or Environmental Protection Program audits had been completed. In response to the Board's Draft Audit Report, Westcoast commented that in 2011 Spectra Audit Services conducted an audit of Crisis Management. During the audit, the information referenced in Westcoast's response was brought forward by Westcoast's emergency management staff; however, it was determined that the Crisis Management audit in question would not meet the Board's regulatory requirements as it did not measure compliance pursuant to sections 52 and 54 of the PPR.

Westcoast did demonstrate that it has a number of audit programs applicable to its facilities. These programs were implemented by staff from Calgary, Alberta or in its head office in Houston, Texas. The Board examined these processes and their management, and has determined that they would meet the Board's requirements if applied appropriately to EM, and with appropriate content to the EM program.

Compliance Status: Non-Compliant

5.0 MANAGEMENT REVIEW

5.1 Management Review

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

References:

PPR-2003 sections 4, 5, 13, 14 and sections 50 through 54

Assessment:

Interviews and record reviews indicate that the EM Program undergoes regular review by Westcoast's senior management starting at the EM Manager through to the president of the company.

While the Board acknowledges the review of the EM Program by Westcoast senior management, based on the non-compliances identified in sub-elements 3.1 and 4.4, the Board is not satisfied that management review has been undertaken with a view to ensuring the continuing suitability, adequacy and effectiveness of the EM Program. The Board views compliance and findings for these sub-elements to rest with senior management. Further, the Board is of the view that senior management is responsible for compliance with its NEB PPR Part 7, Audits, Inspections and Record Retention requirements.

As well, the PPR clearly indicates that an annual audit of the competencies of operational and supervisory employees be undertaken as

outlined in PPR section 54. The Board also views this as the responsibility of company senior management.

Compliance Status: Non-Compliant

Appendix V – Company Representatives Interviewed

Company Representative Interviewed	Job Title
[REDACTED]	[REDACTED]
Company Representative Interviewed (cont'd)	Job Title (cont'd)
	Team Leader Lands and Community Relations
	Manager Operations Engineering (Plant Integrity)

	Mechanical Engineer
	Manager Operations Engineering
	Principal Process Engineer
	Director McMahon Plant
	Team Leader Operations (Co-gen plant)
	Cogen Manager, Team Leader, Operations
	Team Leader Operations
	Team Leader Maintenance
	Team Leader Operations (Steam Chief)
	Team Leader Planning
	Senior Planner
	Health and Safety Specialist

Appendix VI – Documents Reviewed

- Spectra Energy – Assurance – Program Charter
- SET-West Pipeline Integrity Program Risk Assessment
- Minutes of OSC Off-Site Meeting, 18 March 2010
- SET-West Operations Programs organized by focus areas, 12 January 2011
- SET-West Operations 2011 OSC Operating Plan with VP's selected activities/results, 2011
- OSC Risk Profile Presentation
- SET-West Operations Steering Committee Meeting Minutes – OSC Strategy/Planning Session Meeting, 4 & 5 November 2010
- Facility Integrity Strategy – OSC Presentation (Facility Integrity Group – Operations Engineering)
- SET-West Field Services – Operations Management Team Workshop, 26 October 2010
- SET-West Operations Steering Committee – Off-Site Meeting Agenda
- Notes for Operations Performance Measures, December 2010
- Spectra Energy Vision – Presentation
- SET-West EHS Incidents for the Month of December 2010
- Organizational Chart for EHS
- PLFS Field Operations – Recommended Training Requirements (Replaces ICS 200-300 - 5 April 2007)
- PLFS Field Operations – Recommended Training Requirements – ICS 100 (Incident Command System Operations)
- 2011 SET-West Operations Presentation (Purpose/Vision)
- Spectra Energy Transmission Danger Ratings

- First Nations and Continuing Education/Public Awareness (ERP)
- Spectra Energy OMS Roles Chart
- Spectra Energy – Incident Commander Workbook (BC Pipeline and BC Field Services), March 2007
- Spectra Energy – Taylor Complex Operations Training Module: Describe Butane Recovery
- Spectra Energy – Taylor Complex Operations Training Module: Describe GT Area
- Westcoast Energy – Taylor Complex Operations Training Module: Describe BPL Area
- Spectra Energy – Taylor Complex Operations Training Module: Sulphur Handling
- Natural Gas Awareness for First Responders – Train the Trainer Package (Includes CD, Video, Workbook, Leaders Guide, Certificate of Completion, Attendance List, Quiz)
- First Responder Handbook
- Violence in the Workplace Procedure
- Intrusion Alarm Procedure
- Westcoast Energy Inc. McMahon Facilities, Inspection Management Guideline, June 1999
- Duke Energy Gas Transmission, Processing Plant Integrity Program, Pipeline and Field Services, Revision 1.0, 6 May 2005
- Spectra Energy, BC Pipeline and Field Services, Pressure Equipment Integrity Management Program, Revision Number V1.0, 30 June 2008
- McMahon Equipment Listing.pdf
- MCMW - Inspection Report Summary In List.pdf
- MCMW - NCR Log.pdf
- MCMW - PSV List with Schedule.pdf

- MCMW - RBI Summary.pdf
- MCMW - Thickness Data Schedule Summary.pdf
- Inspection Management Guide MCMGP.doc
- McMahon Gas Plant Induction, 2008
- MCMW-Gas Treating, Full Integrity Report, Equipment Number D8-2-4 (Visions printout)
- RTD Quality Services Inc., General NDE Report CZ-050630-02
- MCMW-A&D, TML – TML Readings, Cooling Water for Main Gas Cooler (Visions printout)
- A&D Area, Pressure Vessel / Piping Details: 12” L19W, Cooling Water Piping Drawing
- MCMW-Gas Treating – TML Readings, #4 Rich Solution Vent Tank (Visions printout)
- MCMW-A&D, TML Trending Graphs (5), Equipment Number 12-L19-16W (Visions printout)
- Spectra Energy McMahon Plant Safe Work Permit, Permit #187833, CP Survey 2010, Scheduled Inspection w/Status & SAP Number, MCMW (Visions printout)
- Probe Corrosion Services Ltd, Cathodic Protection – Rectifier Maintenance Procedure
- Probe Corrosion Services Ltd, Cathodic Protection Rectifier Maintenance Checks, February 2011
- Probe Corrosion Services Ltd, Cathodic Protection Survey – McMahon Gas Plant, 2010
- Probe Corrosion Services Ltd, AIT Course Results, Electrical Cathodic Protection Work for Non-Electricians, July 2005
- NACE Cathodic Protection Training and Certification Program, Corrosion Technician 4393, Expires 3/31/2014
- MCMW – Gas Treating – TML Readings, #4 Rich Solution Vent Tank (Visions printout)

- #4 Train Rich Solution Vent Tank, 6P-1383BC, Drawing No D8-2-4-UT, Amine Vessel TML Locations Drawing
- Amine Vessel Risk Assessment data, RBI Number 3620 (Visions printout)
- Degradation Mechanism Log, RBI listing of all damage mechanisms (Visions printout)
- RBI – Damage Mechanisms Descriptions (Visions printout)
- Risk Ranking – Equipment, Tank RBI Listing (Visions printout)
- Scheduled Inspection w/Status & SAP Number, Unit MCMW, Tank Inspection Dates (Visions printout)
- Nonconformance Report & NCR Log, 14/03/2011 for McMahon Gas Plant (Visions printout)
- Spectra Energy Organizational Chart, printed from <http://thesource.spectraenerby.com>