



OF-Surv-FIns-W102-2016 01
15 July 2016

Mr. Mark Fiedorek
President
Spectra Energy Transmission West
Suite 2600, 425-1 Street S.W.
Calgary, AB T2P 3L8
Facsimile [REDACTED]

Dear Mr. Fiedorek:

**Westcoast Energy Inc. carrying on business as Spectra Energy Transmission
(Westcoast)
Safety Order SG-W102-002-2015 (Safety Order)**

On 9 March 2015, the Board (Board or NEB) issued a letter advising Westcoast that Condition 1 (a) and (b) of the Safety Order remained outstanding, since the information submitted by Westcoast was insufficient to demonstrate, through a root cause analysis, where the breakdowns or failures occurred in the implementation of Westcoast's management system or how and by what date Westcoast would correct these breakdowns or failures. Therefore, the Board directed Westcoast to complete and file with the Board a template correlating cited non-compliances with immediate and basic root causes and management system deficiencies by 22 April 2016. On 15 April 2016, the Board granted Westcoast an extension for this filing from 22 April 2016 to 10 June 2016.

As directed, on 10 June 2016, Westcoast submitted a template to the Board that identified, through a root cause analysis, where breakdowns or failures occurred in the implementation of its management system. Westcoast also specified how and by what date it would correct the management system breakdowns or failures it identified in its analysis (Westcoast's Analysis). Appendix A of Westcoast's Analysis set out the commitments, deliverables and schedules to implement the preventive actions. Appendix B of Westcoast's Analysis contained a detailed analysis of the Board's Notice of Non-Compliance's (NNC) and developed Corrective Action and Preventive Action and associated implementation plans. In addition, Westcoast developed systematic actions to specifically identify and correct failures within its management systems that have contributed to the NNCs.

The Board has reviewed Westcoast's Analysis and is of the view that Westcoast has satisfied Conditions 1(a) and (b) of the Safety Order.

However, in reviewing Westcoast's analysis, the Board has identified additional management system deficiencies, as set out in Tables 1 and 2 of Schedule A to this letter, that require additional analysis and potential Systematic Actions development by Westcoast.

The Board is of the view that Westcoast's management system analysis and proposed systematic actions do not explicitly reflect all of the systematic changes that should have been identified through its analysis of the NNC causes and Corrective Actions and Preventive Actions. The Board has identified three management system components that require explicit Systematic Actions to appropriately address Westcoast's management system breakdowns or failures:

1. Inspection, Measuring and Monitoring (IMM)

The Board notes that its review of the information submitted by Westcoast identified that, of the 97 Preventive Actions, 47 include requirements for individual actions to address inspection issues. Further, 31 of the 34 common NNC groups have inspection related preventive actions.

The Board notes that Westcoast has not identified a need to address apparent IMM management system process deficiencies by identifying and implementing specific Systematic Actions.

2. Management Review and Oversight

In conducting its review of Westcoast's Analysis, the Board notes that Westcoast has not attributed any of the causes or systematic deficiencies to actions taken or not taken by its management team, in particular, its Senior Management. The Board is of the view that Senior Management is accountable for ensuring that its companies are compliant, safe and that they protect the environment. In the Board's view, to prevent re-occurrence of non-compliances, and to ensure safety and environmental protection across all of its facilities, Westcoast's Senior Management should have been aware of the results of the Board's compliance verification activities and ensured that these results were communicated across the company and that timely Corrective Actions and Preventive Actions were developed and implemented.

Accordingly, the Board is directing Westcoast to examine and analyze the role played by Senior Management in contributing to these NNCs and to develop Corrective, Preventive and Systematic Actions to address deficiencies in management oversight. Westcoast's Senior Management shall establish Management Review and Oversight management system processes that ensure that the company is operating in compliance and to ensure safety and environmental protection.

3. Quality Assurance Programs

Section 10 of the *National Energy Board Processing Plant Regulations* provides:

a company shall develop, implement and maintain quality control and quality assurance programs in respect of the design, construction, operation and abandonment of its processing plant.

Quality Assurance (QA) requirements are key and normal components of any management system approach. In the Board's view, appropriately designed Quality Assurance Programs include inspection and audits of operational activities to review implementation of company requirements, regulatory compliance and general safety, environmental protection and security conditions. The systemic deficiencies identified by NEB Inspectors should have been identified and corrected through Westcoast's existing Quality Assurance Programs.

The Board notes that Westcoast has not identified a need to address apparent QA management system process deficiencies by identifying and implementing specific Systematic Actions. Westcoast was directed to consider Quality Assurance activities in Schedule "A" of the Safety Order.

Accordingly, the Board directs Westcoast to analyze and develop specific Systematic Actions for these three management system components, as set out in Table 2 of Schedule A to this letter. The analysis shall utilize the same process and format as directed previously by the Board and the Systematic Actions shall be submitted for approval as part of Westcoast's 31 October 2016 quarterly update to the Board.

With respect to the target dates Westcoast submitted for completion of its Corrective Actions, Preventive Actions and Systematic Actions, the Board does not find certain target dates to be reasonable in the circumstances. For example, requesting another year to integrate all hazard identification activities, train workers on the process and then create a comprehensive inventory is unreasonable given that one year has already passed since the Safety Order was issued. In the Board's view, Westcoast should have already had a robust hazard inventory to use as a starting point. The current proposed target date leaves potential hazards uncontrolled, creating an unreasonable amount of risk to the health and safety of all workers. Accordingly, the Board directs Westcoast to amend certain target dates as set out in Table 3 of Schedule A to this letter. For clarity, the Board understands the target dates to be implementation dates for the committed activities and will monitor them as such.

Westcoast has previously identified that it utilizes a single management system applicable to its *National Energy Board Onshore Pipeline Regulations* (OPR) and PPR regulated facilities. The Board expects Westcoast's Accountable Officer to review and verify all correspondence with respect to quarterly reporting. Westcoast may also establish and implement single processes or programs applicable to all NEB regulated facilities provided they meet the requirements of both sets of regulations as Westcoast implements its Corrective Actions, Preventive Actions and Systematic Actions.

In accordance with Condition 1(e) of the Safety Order, Westcoast advised in its 30 September 2015 submission to the Board that it would be filing quarterly updates on the status of Corrective Actions identified in its analysis on the following dates:

- 31 October 2016
- 31 January 2017
- 30 April 2017
- 31 July 2017
- 31 October 2017
- 31 January 2018

The Board will be closely assessing the quarterly updates to verify that Corrective Actions have been implemented by the specified implementation dates, as applicable. The Board will determine whether the individual actions are adequately and effectively implemented during future compliance activities that will be scheduled by the Board.

Closure of the Corrective Actions, Preventive Actions and Systematic Actions will be based on the Board's assessment of the outcomes of Westcoast's actions, as measured against Westcoast's commitments and associated implementation dates, taking into consideration any applicable legal requirements.

The Board has asked NEB technical staff to be available to meet with Westcoast to respond to any questions relating to the new directives contained in this letter. Please contact Ryan Wells, Compliance Program Manager, Programs and Evaluation at 403-909-4655 to schedule a follow-up meeting, if needed.

Yours truly,



Sheri Young
Secretary of the Board

cc: Mr. Greg Ebel, Chairman, President and Chief Executive Officer,
Facsimile [REDACTED]
Ms. Michele Harradence, Vice President, Operations & EHS, Facsimile [REDACTED]
[REDACTED] AGC and Director, Regulatory Compliance & Audit, Facsimile [REDACTED]

Attachment

Schedule A

Additional Management System Elements, Sub-Elements and Revised Implementation Dates that Westcoast is directed to consider in its analysis to be included in its 31 October 2016 quarterly update to the Board.

Table 1:

Board direction regarding the additional management system elements Westcoast shall consider in its analysis including additional Board Direction related to Westcoast's Analysis.			
		Board Direction	
NNC#	Westcoast's Finding/Description of Deficiency, as set out in Appendix B of Westcoast's Analysis, unless otherwise noted	Additional Board Direction related to Management system elements	Additional Board Direction related to Westcoast's Analysis
3	<p>Pipeline crossing markers could not be located on either side of:</p> <ul style="list-style-type: none"> - Bertschi Creek - Red Rock Creek - Never Creek - Cottonwood River 	<p>Paragraph (j), Schedule A of Safety Order: establish and implement a process for identifying, and monitoring compliance with, all legal requirements that are applicable to the company in matters of safety, security and protection of the environment.</p> <p>Paragraph 6.5(1)(v) of the <i>National Energy Board Onshore Pipeline Regulations</i> (OPR) requires a company to establish and implement a process for evaluating the adequacy and effectiveness of the company's management system and for monitoring, measuring and documenting the company's performance in meeting its obligations under section 6 of the OPR.</p>	
4	<p>Workers did not appear to be following procedures with respect to crane use. Annual inspections have not been conducted.</p>	<p>Paragraph (x), Schedule A of Safety Order: establish and implement a process for inspecting and monitoring the company's activities and facilities and for taking corrective and preventive actions if deficiencies are identified;</p> <p>Paragraph 6.5(1)(v) of the <i>National Energy Board Onshore Pipeline Regulations</i> (OPR) requires a company to establish and implement a process for evaluating the adequacy and effectiveness of the company's management system and for monitoring, measuring and documenting the company's performance in meeting its obligations under section 6 of the OPR.</p>	

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Additional Management System Elements, Sub-Elements and Revised Implementation Dates that Westcoast is directed to consider in its analysis to be included in its 31 October 2016 quarterly update to the Board.

7	<p>Leaks in the form of solidified sulphur crystals around several components (e.g., flanges) were identified during the inspection. Several of the leaking components did not have maintenance tags identifying them for repair. Discrepancies were identified in documentation</p> <p>Westcoast provided to the NEB to indicate that repair work on these components had been initiated and completed. Westcoast has therefore been unable to demonstrate that the leaking components are documented in its Maintenance Management System.</p>	<p>Paragraph (u), Schedule A of Safety Order: establish and implement a process for the internal reporting of hazards, potential hazards, incidents and near-misses and for taking corrective and preventive actions, including the steps to manage imminent hazards;</p>	
10	<p>Westcoast has no documented process or procedure to validate contractor quality assurance and quality control programs, and relies solely on the contractors program. It has failed to demonstrate oversight over contractors to ensure quality work is completed. This failure led to a leak in a vessel within the facility.</p>	<p>Paragraph (n), Schedule A of Safety Order: establish and implement a process for verifying that employees and other persons working with or on behalf of the company are trained and competent and for supervising them to ensure that they perform their duties in a manner that is safe, ensures the security of the pipeline and protects the environment.</p>	

Schedule A Continued

Additional Management System Elements, Sub-Elements and Revised Implementation Dates that Westcoast is directed to consider in its analysis to be included in its 31 October 2016 quarterly update to the Board.

11	<p>Severe spalling was identified on the concrete supports of two vessels in the facility. For another vessel, the anchor bolts on the baseplate were found to be functionally compromised. Westcoast failed to demonstrate that the spalled concrete supports and compromised anchor bolts were fit for continued service and did not compromise safety within the facility. Furthermore, Westcoast lacked a program to monitor and inspect the structural and mechanical integrity of the spalled concrete supports and compromised anchor bolts.</p>		<p>With respect to Appendix B of Westcoast's Analysis, the Board directs Westcoast to amend the language contained in part A of the column "Corrective Action(s) Proposed or Submitted to NEB" to include the bolded sentence below:</p> <p>"Stiffening of the parts of the saddle webs for the eight central pedestals was completed on March 30, 2015. Westcoast received another NNC on the pedestal repairs. Westcoast provided an update in March 2016 stating that work will commence in early summer 2016."</p> <p>As committed to in Westcoast's response to Inspection Report CVA 1516-225 dated 8 March 2016, Westcoast commits to having all repairs completed by Fall 2017.</p>
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Schedule A Continued

Additional Management System Elements, Sub-Elements and Revised Implementation Dates that Westcoast is directed to consider in its analysis to be included in its 31 October 2016 quarterly update to the Board.

12	In Appendix A of Westcoast's Analysis, Westcoast indicated in its quarterly deliverable column that it would "Provide the SET West – Plant Staffing Assessment Standard."		The Board directs Westcoast to provide the rollout schedule for the staffing assessment and which stage the assessment is at for all processing plants and facilities.
13	A confined space was observed without proper signage on the cover of caissons.	Paragraph 6.5(1)(v) of the <i>National Energy Board Onshore Pipeline Regulations (OPR)</i> requires a company establish and implement a process for evaluating the adequacy and effectiveness of the company's management system and for monitoring, measuring and documenting the company's performance in meeting its obligations under section 6.	
17	The concrete footing under the Main Plant 6" flare line had heaved, presumably by frost, which may have compromised the integrity of the piping.	<p>Paragraph (m), Schedule A of Safety Order: establish and implement a process for developing competency requirements and training programs that provide employees and other persons working with or on behalf of the company with the training that will enable them to perform their duties in a manner that is safe, ensures the security of the pipeline and protects the environment.</p> <p>Paragraph (u), Schedule A of Safety Order: establish and implement a process for the internal reporting of hazards, potential hazards, incidents and near-misses and for taking corrective and preventive actions, including the steps to manage imminent hazards.</p>	

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Additional Management System Elements, Sub-Elements and Revised Implementation Dates that Westcoast is directed to consider in its analysis to be included in its 31 October 2016 quarterly update to the Board.

Table 2:

Management system sub-elements that Westcoast is directed to consider in its analysis to be included in its 31 October 2016 quarterly update to the Board.	
Management System Sub-Element	Board Direction
1. Inspection, Measuring and Monitoring (IMM)	<p>Westcoast is directed to:</p> <ol style="list-style-type: none"> 1. Redevelop and implement an inspection process that is appropriate for and directly applicable to Westcoast’s operational programs (Integrity, Safety, Environmental Protection, Quality Assurance (QA)) and the <i>National Energy Board Processing Plant Regulations</i> (PPR) including process safety requirements. The IMM process shall include: <ol style="list-style-type: none"> a) Consideration of, and integration with, the management system processes identified in Schedule A of the Safety Order.
2. Management Review and Oversight	<p>Westcoast is directed to:</p> <ol style="list-style-type: none"> 2. Develop, implement and maintain Management Review and Oversight Processes for directing and monitoring the design, construction, operation, abandonment and compliance of Westcoast’s NEB regulated processing plants and facilities.
3. Quality Assurance Programs	<p>Westcoast is directed to:</p> <ol style="list-style-type: none"> 3. Develop, implement and maintain a QA programs in respect of the design, construction, operation and abandonment of Westcoast’s processing plants and facilities that is appropriate for and directly applicable to Westcoast’s operational programs (Integrity, Safety, Environmental Protection, QA), and the PPR, including process safety requirements. The QA process shall include: <ol style="list-style-type: none"> a) Consideration of, and integration with, the management system processes identified in Schedule A of the Safety Order.

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Additional Management System Elements, Sub-Elements and Revised Implementation Dates that Westcoast is directed to consider in its analysis to be included in its 31 October 2016 quarterly update to the Board.

Table 3:

Board Direction regarding implementation dates for corrective actions			
Related NNC#	Westcoast's Commitment as stated in Appendix A of its Safety Order CAPs, which was included as part of Westcoast's Analysis	Westcoast's submitted Target Date for CAP Completion	Board directed Implementation Dates for each corrective action
N/A	Develop a process that will integrate all hazard and potential hazard identification activities. The process will set out how hazards and potential hazards are to be identified and by whom, both for the initial version of the document and on a continuing basis.	Q2 2017	Q4 2016
N/A	Create a comprehensive inventory of hazards and potential hazards and the framework required for its ongoing maintenance, verification and validation.	Q3 2017	Q2 2017
N/A	Provide staff training to enable them to use the process to populate the hazard inventory.	Q4 2017	Q1 2017
18	Provide an engineering guideline to assess pipe integrity that covers substandard pipe supports, frost heave or other causes of bent or swayed pipes.	Q1 2017	Q4 2016
N/A	Develop and deploy a centralized legal register that maintains a list of legal requirements.	Q4 2017	Q2 2017
N/A	Develop and deploy effective processes and tools that enable Westcoast to identify and monitor compliance with the list of legal requirements.	Q4 2017	Q2 2017
12	Add specific processing plant staffing sections (PPR 32, 50) to Process Safety Management (PSM) program legal register. Note: total regulation in whole was listed in the legal register but not the specific relevant sections of the PPR (those being, sections 32 & 50).	Q3 2016	Q3 2016 – For clarity, Staff expects current staffing reports for all processing plants and facilities
8	Deliver training on the management of change process for managing changes to procedures, standards, deviations to key stakeholders, including those stakeholders who make the decisions to defer or cut maintenance work (those who manage the facility shutdown schedules, and those who identify and plan scope for maintenance activities.)	Q3 2017	Q1 2017
N/A	Develop a trending process that identifies similar CVAs or themes discovered during the Investigation phase; that process will also create SAs to resolve the deficiency.	Q4 2017	Q2 2017

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Additional Management System Elements, Sub-Elements and Revised Implementation Dates that Westcoast is directed to consider in its analysis to be included in its 31 October 2016 quarterly update to the Board.

1,28	Verify that security fencing inspection schedules and checklists within SAP align with the "Above Ground Facility - Minimum Security Practices." Assess all other existing facility inspection checklists that pertain to security fencing and eliminate duplications.	Q1 2017	Q4 2016
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